

A SHORT  
HISTORY OF  
LABOUR CONDITIONS  
IN  
FRANCE  
1700 TO  
THE PRESENT DAY

*by*

JÜRGEN KUCZYNSKI

JÜRGEN KUCZYNSKI'S Short History of Labour Conditions in France is the first new survey of the subject since Levasseur's monumental work half a century ago. It embodies the results of new researches in this century and contains his own statistical studies. For the first time we have a wage index for the last 200 years, a study of productivity in France since the early nineteenth century, and accident data for almost the same span of time. The book is introduced with a highly interesting and in many ways timely study of the transition from feudalism to capitalism, and throughout the book we see the history of labour conditions as part of general economic history, with sidelights on the reflection of economic and labour conditions in current French literature. Frequent references to the development in Britain, Germany and other countries during the period under review further contribute to bringing out the peculiar as well as certain generally observable features in the development of labour conditions in France.



2/0  
10/6 net.

A SHORT HISTORY OF LABOUR CONDITIONS  
UNDER INDUSTRIAL CAPITALISM

- Vol. I. 2nd edition, Part 1, Great Britain, 1750 to the Present Day.  
London, 1945.  
Part 2, The Empire, 1800 to the Present Day.  
London, 1946.  
3rd edition, Part 1, Great Britain, 1750 to the Present Day.  
London, 1946.
- Vol. II. The United States of America, 1789 to the Present Day.  
London, 1943.  
2nd edition, London, 1946.
- Vol. III. Part 1, Germany, 1800 to the Present Day. London, 1945.  
Part 2, Germany under Fascism, 1933 to the Present Day,  
London, 1944.  
American edition, New York, 1945.  
2nd edition, London, 1946.
- Vol. IV. France, 1700 to the Present Day. London, 1946.

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VOLUME FOUR

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FRANCE  
1700 TO THE PRESENT DAY

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JÜRGEN KUCZYNSKI

LONDON  
FREDERICK MULLER LTD  
29 GREAT JAMES STREET  
W.C.1

FIRST PUBLISHED BY FREDERICK MULLER LTD.

IN 1946

PRINTED IN GREAT BRITAIN BY

UNWIN BROTHERS LTD.

LONDON AND WOKING



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## PREFACE

THE present volume of my *Short History of Labour Conditions Under Industrial Capitalism* is the last that deals with one of the large capitalist countries. It goes back farther than any of the former volumes because of the special significance of French eighteenth-century history. For French history during this century presents us with a clear picture of the transition from feudalism to industrial capitalism. In Britain we have a slow transition from feudalism to agricultural capitalism during the fifteenth, sixteenth and seventeenth centuries. The industrial revolution in the eighteenth and nineteenth centuries takes place on the basis of agricultural capitalism. In Germany, the industrial revolution takes place in a semi-feudal country, simultaneously with the growth of agricultural capitalism. In the United States, conditions before the War of Independence could not be called feudal. France is the only country where we can observe clearly the destruction of feudalism in all fields of economic activity in the decades before 1789, and the free development of capitalism in the years following the political liberation of the bourgeoisie through the revolution of 1789.

Otherwise the history of labour conditions in France follows the pattern familiar in other countries. But early French statistics allow us to make a number of investigations which, with the present state of our knowledge, cannot be made for Britain and the United States. Since we are able, for instance, to pursue back into the first half of the nineteenth century the study of productivity in individual industries, we are able to check upon certain startling results we found when investigating the same subject for Germany. On the other hand, the state of our knowledge of developments in France under the German occupation during the years 1940 to 1944 is still poor. The treatment of the years since 1939 is, therefore, highly unsatisfactory, and it is to be hoped that French students of labour conditions will devote some of their time in the very near future to a careful study of this period.

In contrast to the first half of the nineteenth century, French labour statistics, during the last eighty years, have had a tendency to deteriorate. During the last thirty years they have reached a level which is barely distinguishable from the low standard of labour statistics prevailing in Britain—in contrast to the relatively high standard which prevails in the United States and, until Fascism came to power, in Germany; in contrast also to the high level attained, for instance, in Czechoslovakia, until the Germans occupied that country. One of the tasks of a progressive French government will be to raise appreciably the standard of French labour statistics. It should be particularly easy for Frenchmen to recall the saying of Napoleon that you cannot govern without statistics. With the present poor state of French economic statistics in general, and labour statistics in particular, it will be impossible for the people of France to plan and direct quickly and with the greatest possible foresight the life of the nation towards a better future.

JÜRGEN KUČZYNSKI.

LONDON,

*November 7th, 1945.*

## CHAPTER I

### THE FIRST PHASE—BEFORE THE REVOLUTION, 1700 TO 1789

THE half century preceding the industrial revolution in France was very different from that in Britain, Germany or the United States. If we date the industrial revolution in Britain as beginning around 1750, we can say with Dr. Drummond\* that during the half century preceding the industrial revolution, "fortune smiled on most of the people of England." Not that the poor were well off, and that the rich were not rapidly growing richer. But conditions among the masses of the people did not show any tendency to deteriorate markedly. If we date the beginning of the industrial revolution in Germany around 1800, we find the conditions of the poor in the preceding half century worse than in the corresponding period in Britain (1700 to 1750); but we cannot say that the industrial revolution was preceded by a period of exceptional poverty and misery. As to the United States, it would not be surprising to find that most of the colonists before the industrial revolution had experienced a period during which living conditions were improving. In France, however, the industrial revolution—the earliest beginnings of which we need not date much later than in Britain—was preceded by a period of unprecedented misery.

But the development of social conditions in France during the period from 1700 to 1789 was remarkable not only for the fact that it differed from that of other countries with respect to the state of the people in "pre-industrial-capitalist society. For this difference was only one result of the somewhat exceptional general condition of affairs in France.

The explanation of this exceptional condition prevailing up to 1789 is the fact that France experienced a delayed revolution.†

\* *The Englishman's Food*—see also vol. i, part i, of this *Short History*, p. 37.

† A. Mathiez, the great French historian of the Revolution, on the first page of his *La Révolution Française* refers to the slow process of its preparation.

Whenever a system outlasts its useful rôle in history it becomes a terrible scourge and burden for the people living under it, and—if it is aggressive—for all peoples and nations against which it hurls its decaying body. We who have lived through the recent years with open eyes have had this terrible experience in the case of German Fascism—that is, German imperialism grown into a monster of “historically outgrown” proportions.

On a much smaller scale, but not dissimilar in character, was the development of French feudalism during a large part of the eighteenth century. In Britain, the bourgeoisie—agricultural capitalism, merchant capitalism, and, to a lesser extent, manufacture—had won through against feudalism. In Germany, feudalism was still relatively strong, firmly based economically, ruthless, and a source of misery to the masses of the people, as is any ageing social system. But in France, feudalism was in a state of disintegration, no longer self-supporting, no longer able to function efficiently and to guarantee the masses of the people some sort of existence. Although “milking” certain branches “alien to feudal economy” French feudalism was not able to integrate them somehow into its society, but continuously threatened their existence, as was the case, for instance, with regard to the manufacturing industry.

Because of the experiences of our own generation, it is particularly interesting to study some aspects of the state of France, apart from labour conditions, during the years from 1700 to 1789. I shall deal with them under two headings: Why Was There no Revolution in 1715? and The Undermining of the Economic Foundation of the Ruling Class.

## 1. WHY WAS THERE NO REVOLUTION IN 1715?

### I

“Throughout the countryside, one finds a species of sullen animals, male and female, black yet livid, burnt by the sun, part of the earth which they search and turn over with an unbreakable, dull persistence. They emit sounds rather like those of an articulate being, and when they rise upon their feet they reveal the face of a human being. In fact, they are humans. At

night, they withdraw into hovels where they live on black bread, water and roots. They save the rest of mankind the hard labour of sowing, tilling and harvesting, and therefore do not deserve to go without the bread which they have sown."

In these terms La Bruyère described the French peasants in 1680 or thereabouts. But however harrowing his description was, it was by no means as bad as the conditions which were to follow a quarter of a century later.

The French peasant who lived in the early years of the eighteenth century could indeed look back to a lost paradise in which his father had lived before him. For during these years of unbelievable misery even bread had disappeared from his hovel and he was left with nothing but roots and water. Only a few years had gone by, but within that short time the stench of a people dying of hunger had enveloped the country.

During the first fifteen years of the century the population of France decreased by more than a million. In some provinces, the population was reduced by as much as a third; in some, even more.

And this suffering was growing not only in the countryside but in the towns. Clothing workers in their thousands abandoned their looms and left their homes in Northern France to escape to Holland. The Lyons workers sought refuge in Turin and other towns of Northern Italy. Hunger and unemployment drove them from their homeland.

Here and there, in the countryside and in the towns, the people rebelled against hunger, unemployment and epidemics. There were demonstrations and strikes, and the call to armed revolt against the local authorities.

\* \* \*

In the frontier provinces, wars laid waste the country. A European coalition had arisen against France and her political supremacy. At the head of the hostile armies were two generals of genius: Prince Eugen of Savoy and Churchill of Marlborough. War broke out in 1701. Victory after victory fell to the hostile armies. In the end, in 1713 and 1714, peace was concluded. France had to hand over to England her possessions of Nova Scotia, Newfoundland and Hudson's Bay. The Spanish Nether-

lands came under Dutch rule; Prussia, too, enlarged her territory at the expense of France.

The last two years of the reign of Louis XIV began. They were called "years of peace," but they were years of one long agony for the country.

The national exchequer was completely depleted. National bankruptcy was declared in 1710, in 1713, and yet again in 1715. Money devaluation was resorted to eleven times between December 1, 1713, and September 1, 1715. Expenditure totalled 1,914 million livres between 1708 and 1715 whereas revenue amounted to only 461 million. The national debt grew rapidly and, by 1715, had risen to 2,471 million. The revenues for the years 1716 and 1717 had already been exhausted by 1715.

\* \* \*

Foreign trade had almost ceased. Corn prices had risen enormously: wheat, in the years between 1709 and 1715, was about three times dearer than between 1702 and 1708. Credit was to be had only at usurers' terms. Much of the arable land was left uncultivated. Workshops stood idle. The country produced little; it languished, its strength had been sapped.

\* \* \*

The king was old and weak. Toward the end of the war, he broke down: he neither knew how to continue the war nor how to finish it. The heir to the throne was not yet six years old. There were intrigues with regard to the choice of the future regent. The nobility was split in two factions, and nowhere was there a sign of a leader. Dire poverty and the most refined luxury no longer distinguished only the masses of the people from the ruling class. There was a high barrier between the small poverty-stricken country squire and the rich nobles whose idle elegance in Versailles and Paris was paid for out of the rents which they drew from their estates. Similarly the great mass of the small clergy, eking out a living in their wretched country parishes, were miles apart from the higher church hierarchy who lived in the towns in sumptuous splendour.

Intellectual life was at stagnation point. Little by little, the glory of the French art, which had shone so warmly over the country and over the world during the early years of the reign,

had paled. About 1710, it died. Drama, poetry, painting, sculpture, architecture—all were at low ebb. In 1709, the state paid out only 1.2 million livres for public buildings and the arts generally whereas more than 15 million was spent in 1685. In 1713, orders given for paintings amounted to as little as 1,000 livres, i.e. to 0.8 per cent of what was lavished in 1680.

\* \* \*

At last the king died. Contemporary chronicles tell of the people filling the churches to thank God for the deliverance which He had, at long last, granted. But, the Regency met with no revolt. Nowhere did the people rebel. The squabbles between the various cliques within the ruling class were in no way out of the ordinary. No voice called to struggle against hunger and misery, tyranny and oppression.

The country was hoping again—hoping that conditions might improve. It looked to the past, and not to actual conditions, to find reasons for its discontent. It saluted the young king, and bowed before the Regency.

Every hope centred on the future, and everyone believed that the future would bring blessings to one and all. In the magic light of that hope, the misery in which the people lived dwindled in significance.

The nobles dreamt of still higher rents and sinecures yielding still more profit; the churchmen hoped for new prebends and other offices of profit. The finance bourgeoisie prepared to fill its pockets from fresh speculations; the commercial bourgeoisie counted on a long era of peace during which trade and commerce would flourish; the industrial bourgeoisie was looking forward to growing production and consumption. The peasant believed that the harvest would be good, and the burden of his taxes lessened; the journeyman saw himself fully employed, and at better wages. And the petty bourgeoisie and artisans hoped, of course, to share in the all-round prosperity. Commissions for new work were expected at long last by the poets and writers, who had been waiting for them so long.

Why all this? Why did the year 1715 not bring the revolution? Why did the masses not rise? Why was the ruling class able to maintain itself in power?

## II

Towards 1700, two groups made up the ruling class: the nobility and the clergy. Within the state, these two groups constituted two distinct *ordres*. But, in fact, the individuals who made up these *ordres* were members of one and the same social class, and often of one and the same family.

The outstanding difference between the ruling class and the classes it directed and dominated lay in its privileges, based originally on the differences in wealth in feudal society. But in 1715 the difference between the rulers and the ruled was no longer only a difference in wealth, but also in the source of wealth; for in contrast to our own days, and in contrast also to the earlier days of feudalism, the term "ruling class" was not necessarily identical with "possessing class." True, every member of the upper strata of the ruling class was wealthy—but not every wealthy person belonged to the ruling class; he could have been a mere bourgeois. Nor was the majority of the members of the ruling class wealthy.

The number of those who enjoyed privileges was small, below a quarter of a million, in fact, at the beginning of the eighteenth century, when the population amounted to about 17 or 18 million. About half of the privileged belonged to the order of the nobility, the other to that of the clergy.

\*     \*     \*

Roughly one-fifth of the soil of France was owned by the Church, and the Church's yearly revenues were larger than the State's annual income from taxation. In part, this revenue came from the land owned, in part it flowed from the levy of taxes such as the tithe. In some provinces, as much as half the soil—and generally the better land—belonged to the Church.

Foremost among the clergy's privileges was exemption from taxation. (It sometimes happened that the State was obliged to make inroads on this privilege in order to save itself from financial ruin; but the clergy each time succeeded in striking a good bargain.) Over and above this privilege, the Exchequer handed enormous sums over to the clergy every year: the rents which had been granted by the king.

Often, the Church had the right to nominate the incumbents of purely lay offices, and it even presided not infrequently over lay courts. The Church dignitary who combined in his person temporal with ecclesiastic powers was typical of that time.

The clergy were well organized, not only in so far as they constituted a hierarchy and a bureaucracy, but also as a body politic. Every five years, its members were called together in assembly and delegates were chosen whose special function it was to defend the clergy's interest within the state. To these delegates fell approximately comparable tasks as to the bourgeois parliamentary representatives and corporation lawyers of our own day. They had to see that tax exemptions were respected; they sought to obtain further subsidies from the king; they protected the clergy's other privileges from every encroachment, and tried to add to them in every possible way.

Two groups made up the clergy—the high and the lower. Usually the Church dignitary was a rich man who enjoyed a millionaire's income. Only rarely did he put up with life in the provinces; usually he lived in Paris or at the Court, and delegated his work to some underlings. A year might go by without his having even set foot in the domain of his office.

The lower clergy lived in the provinces, and usually on very scanty means. Their social position, however, was privileged.

Also in the monasteries there were some millionaire churchmen. For these institutions were often exceedingly rich.

For the most part, the highest and secondary functionaries of the Church were of noble origin. Not often could one find a man of bourgeois descent among the high dignitaries. The lower clergy, however, generally came from the Third Estate.

\* \* \*

The position of the nobility was just as strong as the clergy's. They were not quite so well organized, but, on the other hand, they counted among their number the king, the foremost nobleman in the kingdom.

On the whole, the nobles' privileges were rather like the clergy's except for the fact that sometimes they were even more extensive and brought in even higher revenues.

Like the clergy, the nobles, excluding the king, owned about

one-fifth of the French soil. The king's holdings amounted to yet another fifth.

The nobility also enjoyed tax exemption. But, since they were not so well organized as the clergy, they could not, as a class, avoid payments which the state demanded of them in times of great financial stress. On the other hand, the income return figures which they supplied to the state were so low that in the end they paid hardly more than the clergy.

Aside from all this, the nobility had the right to levy taxes such as the tax on drinks, on articles wrought of silver or gold, on the production of paper, and so on. They imposed a duty on all sales in the market situated in their territory; they collected duties at the customs barriers, and toll payments at the bridges. Not every nobleman could exercise all these rights, and not always throughout all of his territory; he might be able to levy a certain tax only in a small locality, and another throughout a whole province.

In many parts of the country, he presided over the court of justice, and often he was allowed to pocket the fines which he himself had imposed, or even to keep confiscated property.

Above all other groups, the nobility was entitled to the important posts at the Court or in the state. The most important charges in the army were theirs by right. Salaries and appointments of each of the most lucrative of these posts—a thousand in number, all told—amounted to at least 100,000 francs a year, and many of these posts brought in far more than a salary. Fraudulent, but recognized, practices had grown up everywhere which added considerably to the regular payment for many posts in the army and at the Court. First ladies of the Queen's bed-chamber increased their incomes by the sale of the candles which had been lit during the day. Or a certain great-admiral levied an anchoring tax on every vessel to enter a French port. And of course, everyone tried to make sure of a pension, over and above everything else, or to get the king to pay his gaming debts, and so on.

If one's own influence did not secure a desired post, one had to buy the favour of the man in control. Certain posts were bought and sold like merchandise and had their recognized market price. In 1701, for example, two posts of finance director were created; they cost 800,000 livres each. And in the absence

of sufficient funds there were always people ready to advance the necessary money since everyone knew that these offices would bring in enough to allow the debtor to settle.

Like the clergy, the nobility fell into two groups: those who lived at Paris or Versailles and whose incomes were almost always very high, and those who lived on their land in the provinces. A great many of the latter had gradually lost much of their fortunes. Their privileges did not bring in a great deal, and the style in which they lived was more like the peasants' way of life than that of their fellow nobles in Paris or Versailles. La Bruyère has described them as follows: "the country gentleman, useless to his fatherland, to his family and to himself, often without a roof over his head, without decent clothing, without merit whatever, but who repeats a dozen times a day that he is a gentleman. . . ."

There were also, of course, among this group some rich families who lived in the country because they preferred country life to the Court.

Most of the nobility still came of old families. But the number of those who were raised to the rank of nobleman was increasing steadily. For example, in 1691 and in 1692 the Treasury received some 18 million livres for the sale of patents of nobility. At the same time, the *noblesse de robe*—the privileged class of the upper civil service and judiciary—increased in numbers and in wealth; but its power was in no way comparable with that of the *noblesse d'épée*—the nobility proper.

\* \* \*

Clergy and nobility constituted the first and second order as far as their civil status in the state was concerned; politically, they made up a single ruling class together with the king—the largest landowner and the most privileged individual of them all—at their head. He owned about as much land as the whole of either the clergy or the nobility, and his income was higher than the total income of either group as a whole.

Of all the ruling class, he was the most powerful as an individual and, at the same time, he exercised the executive power for his class. The king maintained his power not only by virtue of the "concerted consent of the members of the ruling class," but also

by means of his personal lordly powers, so that his position was fairly well secured.

On the other hand, his position was to a certain extent precarious because his class looked upon him not only as the state's executive instrument—that is, the agent executing the will of the ruling class—but also as the most powerful of all the members of the ruling class—that is, a most dangerous rival.

\* \* \*

In the Third Estate, we find a great many heterogeneous groups. We must still speak of groups, not of classes; for neither the bourgeoisie as a class, nor the working class, had as yet come into existence. These agglomerations were as yet not sufficiently clearly defined.

The group which directed the policies of the Third Estate was the bourgeois group. Within this group the following elements could be distinguished: the financial, the commercial, the industrial and the guild bourgeoisie.

Of all these, the guild bourgeoisie dates back furthest. Around 1700 the corporations still played quite an important rôle in the economic life of the nation. The time of their greatest glory was long over; they were overburdened with debts, they wasted their time on jurisdictional disputes and red tape. Here and there, they were already meeting with competitors who refused to recognize their authority; production was beginning to throw off the restrictions which they were still trying to maintain in force. The more difficult it became to establish young masters and journeymen who had completed their training, and the easier it became for young workers to be taken on by competitors who ignored the corporation rules, the faster the process of liberation advanced. Still, the corporations' influence on the social and political life of their time was far from negligible.

Second to emerge in history had been the commercial or merchant bourgeoisie. It flourished in the trading towns rather than at Paris, and individual merchants could measure their wealth with that of the members of the clergy or nobility. At Rouen, for example, the Legendres family owned a fortune of some four or five million livres, and the Guenets or the Asselins had almost a million. Because of the nature of their interests, these merchants

had to attend to business far from Paris—that is, far from the country's political centre where they would have been able to defend more easily their personal interests, as did the clergy or nobility. In spite of this drawback, their power was growing and, as the years went by, other bourgeois groups came into existence, thus to strengthen their position.

The industrial bourgeoisie was of much more recent origin but was gaining in importance because of the country's increasing industrialization. In 1700 France produced about 22,000 tons of pig iron, about twice as much as England. Cotton production consumed about half a million pounds of raw cotton in 1688. A great many workers were employed in building merchant ships. True, in 1715 industry was no less on the decline than trade; the amount of capital accumulated was, however, already large enough to enable the budding industrialists to overcome the crisis.

But of all the bourgeois groups mentioned the most powerful was the financial bourgeoisie. It was the most closely allied to clergy and nobility. It had the best political connections. It furnished the funds to those who wanted to buy high posts. It advanced money to gentlemen and churchmen who were awaiting royal grants; and the king himself was not above accepting its financial favours. It frequently undertook to collect taxes for the crown. Of all the bourgeois groups, it purchased the largest number of patents of nobility. Just as, nowadays, we speak of a "labour aristocracy," the financiers in 1700 could doubtless be called the "aristocracy of the bourgeoisie."

The petty bourgeoisie, especially the small handicraftsmen and small traders, did not as yet play a definite rôle, nor did it have political aims and methods of its own.

But it was the peasants who made up the great mass of the people. Most of them were still serfs in 1715. Part of their produce as well as part of their weekly working time went to the noble lord who owned their land. Often they depended upon him, at a price of course, for the use of ovens, wine-presses, flour-mills, slaughter-houses, and so on. Children frequently could not inherit even small personal belongings unless they undertook to stay in the locality and remain in the lord's service. Peasants were pursued if they attempted to leave their lord's domain, and all the property of a fugitive went to the local lord.

Most of the peasants' harvest went to pay taxes which the state and the lord pocketed. Bad harvests meant virtual famine. In peace and in war large numbers died of hunger. There was no appreciable movement from country to town because they were attached to the glebe either by the provisions of feudal law or by their indebtedness.

As to the workers, their number was as yet small. Here and there, they were beginning to make their influence felt in the towns; in the countryside they hardly counted. They were working for a wage, but they were far from being "free" workers in the modern sense. Their working-day was minutely regulated; everything had to conform to definite rules—their dress, their dwellings, their religious life, even the hour when they went to bed. Often enough, manufacturers imitated the corporations and evolved similar rules, but a good number already disregarded such practices. Wages were lower in 1715 than they had been during the whole of the period 1650–1700. We have little enough information, and much of it is none too exact; but, such as it is, it does undoubtedly indicate a decrease in real wages from 1700 to 1715 as compared with the average for 1650–1700.

But, whether it be the wealthy bourgeois financier or the poorest peasant or worker, these people had one thing in common: they did not belong to the privileged order. They were not equal to the privileged before the law; both the law courts and tax collectors served for them a different treatment. They all belonged to that great heterogeneous mass, the Third Estate.

### III

What are the conditions under which a revolution "breaks out?" It breaks out on the one hand, when the economic basis of the ruling class is decaying and its ideology disintegrates, and when, on the other hand, the oppressed class has attained a degree of ideological maturity enabling it to resolve to overthrow its masters and when it or its vanguard is well enough organized to triumph over the ruling class and deprive it of its power. With regard to the France of the eighteenth century that means:

A revolution in 1715 would have been possible only if, on the one hand, the economic and ideological disintegration of the

ruling class had progressed too far to permit it to continue in control.

Agriculture was the economic source of the ruling class's power in 1700. At the same time, agriculture was the most important source of wealth for the country as a whole. True, industrial production, trade and finance had acquired a certain position within the national economy but they yielded as yet only a negligible part of the national income as compared with the wealth produced by agriculture.

As yet this source of wealth of the ruling class showed no signs of exhaustion. The French peasant's labour still enabled clergy and gentry to rule the country. Although peasants died off in large numbers, there remained enough of them to keep production going so that the ruling class could maintain the economic system and the state in effective existence.

As to feudal ideology—there was no sign of its disintegration. It still stood intact, an armour which had not yet had to withstand even the attack of bourgeois sedition. Nowhere was any serious opposition to the régime to be found. The most determined "enemies of the system" were men like Boisguilbert, lieutenant-general of the police of Rouen—a very influential post at that time; Vauban, marshal of France; the duke of Saint-Simon, peer of France; and the archbishop Fénelon. Every one of them belonged to the ruling class; each was a reformer, dead-set on his own particular idea, never thinking of joining forces with other reformers. They had in common their hatred of revolutionary measures, as well as lack of disciples and followers.

Saint-Simon stood for a reform of the administration. He thundered against bureaucracy and corruption, and wished to exclude the bourgeois and newly-made nobles from the Court and the administrative machinery.

Fénelon advocated replacing tyranny with moral principles.

Vauban extolled a new and much simpler system of taxation which would help trade by the abolition of interior tolls, and would lighten the taxburden on the Third Estate. His "Project for a Royal Tithe" ran through several editions within a short time but its effect on Court circles was no more powerful than that of La Bruyère's moral tales.

As for Boisguilbert, he was a rather curious character. On the one hand, he urged "the return to the good old times"; he wished to limit the use of money in favour of payment in kind, and he underlined the importance of agriculture, as compared with manufacturing. On the other hand, he favoured the introduction of progressive measures such as the abolition of protective tariffs and of restrictions on import and export of corn, and taxation graded according to income. But, on the whole, he thought the ideal period to be that of Henry IV.

Such was the opposition within the ruling class—it numbered some men of great intelligence and magnificent and varied qualifications, some of them in influential posts, some of them reactionary romantics of high personal standing. But they failed to attract adherents who would fight body and soul for their principles. No group with enough political power to back its particular views adopted their ideas, nor did they themselves try to form such a group. They speculated vaguely, but did not think of fighting actively against corruption, bureaucracy or tyranny.

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What was the position during this period of the oppressed elements—the Third Estate? Had it as yet developed its own ideology and succeeded in setting up a political organization resolute and strong enough to attack the ruling class?

Before this question can be answered, two different groups have to be distinguished: those who had nothing left to lose, the peasants and the workers; and those who had an interest in the defence of property—the middle class.

The first group was ready enough, had the occasion arisen and a leader assumed command, to fight the ruling class. But the peasants' revolts which occurred several times during the first fifteen years of the century, caused by famine and hardship, were sporadic and unorganized, for the most part, and were rarely directed towards any purpose other than immediate relief.

So far, the peasants and workers had not achieved the ideological maturity which would permit them to develop their own leaders. For their ideas they were dependent upon the bour-

geoisie, i.e. upon those members of the Third Estate who also suffered oppression but who had accumulated some property. Workers and peasants were ready enough to fight, and to take revenge for all the misery suffered: the history of that time is rich in tales of spontaneous revolts and strikes. What they lacked was the ideological preparation. In the towns—that is, among the workers—they also lacked numerical strength, and in the countryside there were not even the beginnings of an organization. All their efforts were in vain, in the absence of central direction or, at least, regional co-ordination.

And even had there been such direction or co-ordination, a more widespread and better organized revolt would not have resulted in a revolutionary victory. For the ruling class was as yet too strong. Nevertheless, these revolts and strikes were important and fulfilled a necessary task. They should not be ignored or underestimated. At times, they brought a certain relief and, above all, they taught men how to fight authority.

As to the second group, the bourgeoisie did not have to contend with daily suffering, and, while the future still held much material gain for them, they already risked losing much.

The moment had not yet come when they were willing to risk losing all they held in order to take power into their own hands. It was obviously too early as yet, and for three reasons.

In the first place, the economic foundations of their class were not yet stable enough; the new forms of economic life were as yet in their early stages; industrially the country was still weak.

In the second place, much of the bourgeois economic activity was an integral part of the existing system and dated back to the best periods of feudalism. Revolutionary changes were of no interest to those who worked within the framework of the guild system and were opposed to the budding manufacturers. Nor was the manufacturing apparatus a purely bourgeois matter: it was integrated in some ways in the feudal system. The mercantile bourgeoisie also went back to old feudal origins, and the fortunes which it had accumulated proved that it had found the system not incompatible with its interests.

In the third place, those bourgeois groups which were hampered in their economic activity by feudalism were still hoping for the introduction of a number of reforms which would guarantee

them a place within the system which was at present hindering them. Why, they argued, might not matters develop as they had for the mercantile bourgeois? With the enactment of suitable legislation, the guilds might end by resigning themselves to the existence of the competitors. And the growing influence of the financial bourgeoisie would seem to justify the hope that complete agreement might be reached with the ruling class. The state could dispose of still more patents of nobility and a new "manufacturing gentry" would step into its place by the side of the established gentry.

At the beginning of the eighteenth century, then, the bourgeoisie revealed neither the unity of purpose nor the clarity of perspective which a revolutionary struggle against the ruling class would require. Furthermore, it was not strong enough for such a conflict; and, quite apart from serious political preparation, it lacked even the desire for a radical change.

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For all these reasons, no revolution broke out in 1715, although here was a country which had passed through years of widespread and intense misery from 1709 to 1715, a country which had lost the political supremacy of Europe, a country in which rebellious convulsions had been taking place, a country in which the political situation—a child was to succeed the dead king and two palace parties were quarrelling over the Regency—seemed to favour radical changes; and in which, after all, there existed a bourgeoisie which had already attained some economic strength.

## 2. THE UNDERMINING OF THE ECONOMIC FOUNDATION OF THE RULING CLASS AND THE LAYING OF THE ECONOMIC FOUNDATION OF BOURGEOIS RULE

During the eighteenth century there took place in France a certain expansion of the agricultural foundation supporting the ruling class. About the year 1760, roughly as much acreage was sown in wheat as at the beginning of the century but the yield had become higher, so that the harvest usually provided enough to feed—although with increasing inadequacy—a growing population. Though not quite as rapidly as in England, the population

of France increased very considerably during the eighteenth century.

## POPULATION IN FRANCE AND THE UNITED KINGDOM

	<i>Year</i>	<i>Mill.</i>	<i>Year</i>	<i>Mill.</i>	<i>Year</i>	<i>Mill.</i>
France .. ..	1698	19·8	1762	21·8	1780	25·1
United Kingdom..	1712	9·4	1754	10·7	1780	12·6

The value of the arable soil rose, of course, with its increased yield, and with it rose the revenue which the ruling class derived from the land.

This development, which seemed to favour the ruling class and to strengthen its position, became even more pronounced during the second half of the century, and in particular after the Seven Years' War. The land produced more; wheat prices rose somewhat, while the prices of non-agricultural goods, on the contrary, tended to fall slightly. Land prices also rose constantly.

From the second half of the century onward, "scientific agriculture" became widespread. In the provinces a number of agricultural societies were formed. Wheat no longer claimed almost exclusive interest, but growers began to turn with serious attention to the raising of live stock. Veterinary schools were founded, and the merino sheep made its appearance in the French countryside. The standard of French agriculture, thanks to the rapid progress made, began to approach the standard prevalent in England.

All this would seem to indicate not only that the ruling class enjoyed a stronger economic position, but that this position would improve still further in the years to come.

This impression, however, is misleading, for two reasons:

In the first place, the luxuriousness of the ruling class's standard of living had increased even more than had its revenue, so that the gap between income from the land and expenditure widened steadily. The economic resources of the ruling class, in relation to its way of life, had narrowed and grown less substantial.

Secondly, the share of agriculture in the nation's economic activities declined. Although agriculture still had first place, although the value and amount of agricultural production was increasing, the value and amount of non-agricultural production

grew still faster. Industrial production, trade and commerce, usually in the hands of the bourgeoisie, forged ahead more quickly than agriculture. Thus, the economic basis of the ruling class was losing relatively in importance.

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Let us examine the growing disparity between the income, derived from agricultural land-owning, and the living expenses of the ruling class.

As before, the upper strata of the nobility and clergy lived with the Court in Versailles and Paris. The mode of life at the Court had become even more luxurious and unrelated to the economic basis of the ruling class than under Louis XIV. Moreover a new fashion decreed that every true nobleman, every high churchman who sought to live according to the dictates of his time, had his own Versailles in the country where he spent part of the year and endeavoured to rival the luxury of the king's own court. These nobles and Church dignitaries had their own theatres and a personal retinue which sometimes ran into hundreds. The cost was such that the income from the land covered the expenses less and less, and one had perforce to take to living part of the year as the king's guest in Versailles. These "hereditary" guests of the king, as well as those who could not transmit this privilege to their heirs, were given an office which entitled them to a yearly rent or other income.

The incomes which the king granted became of ever greater importance, as compared with the yield from the land. In the end, roughly 12,000 persons were dependent upon the king's favour. Among the "offices" held by these 12,000 were, for instance, those of the keeper of the king's walking stick, or the two examiners of the king's nightpot, posts which brought in 20,000 livres per year. These sinecures alone consumed about one-third of the non-military budget!

But whence did the king take all the money which he needed for keeping this retinue of nobility and high clergy? Agriculture still furnished the larger part of these moneys, since the major proportion of the fiscal revenues was derived from the rural population. On the other hand, a mounting share of the taxes was collected from the bourgeoisie. With the growth of bourgeois

wealth during the century, this share increased considerably.

Thus, two tendencies operated at one and the same time and influenced profoundly the redistribution of the sources of wealth from which the higher nobility and the higher clergy drew their income:

On the one hand, they received, either as gifts from the king or in the form of compensation for Court and state offices, a growing proportion of the general fiscal revenues. And, on the other, a steadily increasing part of these revenues was being furnished by the bourgeoisie.

In this way, the economic foundation of the ruling class underwent a change of the greatest importance in the course of the century. Up till then, the peasant as the victim of ever intensified exploitation, had been almost the sole producer of the wealth of the classes which ruled him; but henceforward the bourgeoisie would be expected to put more and more of its growing wealth at their disposal. Instead of dependence on a rural economy—which was unable to shake off this domination—there was a growing dependence on a class which had acquired, together with its wealth, a certain economic power, and which was to develop a new and strong ideology, opposed to the interests of its oppressors.

Moreover, this supplementary income which the nobility and clergy drew in one way or another from the bourgeoisie flowed from a source which was alien to the prevailing feudal system. It did violence to the homogeneity of the feudal structure, and thereby weakened it. The very existence of and dependence upon that source was greatly to facilitate the undermining of the system, and indicated the point where resilience and solidity would be less, and therefore an attack would most likely meet with success.

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Change was also at work in the organization of industry. Up to the beginning of the eighteenth century, the guilds predominated. They were typical for bourgeois organization, but part and parcel of the still prevailing feudal economic system.

But in the course of the century, they lost a good deal of

importance, the main reason for this was that they had to give way to some extent to manufacturing enterprise. In addition, and ironically enough, the very state of which they were so much a part, acted so as to weaken the only bourgeois group which was not alien and upon whose support it could count in a struggle against the other bourgeois groupings. Taxes drained the guilds' resources and reduced them to economic impotence. Bankruptcy threatened them early in the century, and at various times attempts were made to redress their finances. Yet, by 1750 their debts amounted to some twenty or thirty million livres. And still the state imposed yet newer taxes.

State-appointed inspectors were set to see to it that the ever multiplying rules and regulations were being observed, with the result that production was practically throttled. Later, the guilds were allowed to appoint their own inspectors, a privilege for which they had to pay heavily. At another time, the authorities would announce that they were about to distribute masters' certificates. Unless the guilds were prepared to see their monopoly broken, they would have to buy up the patents at enormous cost, knowing full well that the state would resort to the same expedient before long. Continuous litigation by which the guilds sought to preserve their threatened privileges swallowed up untold sums. The number of such legal actions amounted to tens of thousands, and, around 1750, the Paris guilds alone were estimated to have spent on them about half a million livres a year. How complex the rules had become, and how anxiously the guilds were watching to see that their rights were respected, may be judged from the fact that they printed and distributed handbooks enumerating the endless list of rules, regulations and privileges, which non-members or manufacturing outsiders, might violate.

But the decisive cause of the guilds' decline lay in the general economic development: the new manufacturers produced more cheaply and quickly and found a steadily widening market for their products. They were able to produce, in a single working place, goods hitherto produced by a number of different and separated corporate trades; and, in the place of the old division of labour as between trades, they made use of the new division of labour within the workshop, and achieved in this way a far-

reaching simplification of the industrial process, and consequently, a considerable reduction in production costs. Furthermore, the manufacturers won not only what the guilds lost. They conquered fields where the guilds had not even tried to do business by multiplying their products and attracting new buyers everywhere.

The middle of the century witnessed a decisive turn in favour of the manufacturers. Not that manufacturing production amounted in volume to more than guildcraft production. But the principles of manufacture had definitely found their place in the economic system and could no longer be menaced with extinction. Although the revolution was still far off, its victory had become a certainty. Around 1760, the foundation of industrial capitalism had been laid and was secure enough to afford a springboard for the bourgeoisie which was by now getting ready to conquer power.

Large-scale industry, of course, played a very minor rôle as yet. In the textile industry, a few large-scale undertakings started production in the second half of the century. In metallurgy, the Creuzot and the de Wendel works began operation just before the outbreak of the Revolution. The most drastic changes were taking place in coal-mining where the expropriation of small owners in favour of the big mining interests was proceeding at a formidable rate.

In all this, the manufacturing bourgeoisie was fighting against the corporations as well as against the not always unfriendly but always extortionate attitude of the ruling class.

The corporations sought to forbid non-guild manufacture by referring to their "rights of production" of numerous commodities. Through legal proceedings, and often with the help of intervention by the state, they endeavoured to make the erection of a manufacturing establishment impossible. The prospective manufacturer, on the other hand, often found a by no means unfriendly ear at Court—but the ear functioned only after the hand had been well greased with thousands of livres.

The state not only had to be bribed in order to favour a manufacturer as against a guild, but it also reserved the right of closest supervision of production which gave it the chance to extort new sums. For example, if the production of dark blue silk

ribbon were to be changed to that of medium blue silk ribbon, this would mean paying for permission. Sometimes each new shade of colour had to be paid for specially, if permitted.

Two traits characterize the industrial economy of France during the last half century of feudalism: an extraordinary degree of state regulation and a monopolistic trend in production with a number of traits known also in present-day monopolies: tendencies to restrict production, to fix prices, to retard technical progress and to control markets.

Increasing state regulation in the interests of a small ruling class is a phenomenon which we usually find in a society which is nearing its end and has grown too weak to maintain itself against the new forces developing in its womb. We find it during the last phases of feudalism—in France as well as in Britain and Germany—and we find it to-day wherever capitalism is moribund, most sharply expressed in Fascism.\*

Monopolies, directed against the interests of the people, also are a phenomenon to be observed in a moribund society, under feudalism as well as capitalism, though, of course, like state intervention, they are not identical in form and character under both feudalism and capitalism.†

In France, during the eighteenth century, industrial monopolies had a great variety. They referred to certain localities, to which the exclusive right of production of certain goods was given, or to certain families, guilds and manufacturing establishments. They represented a final attempt under feudalism to keep production on certain well defined lines and within certain privileged hands. They were an attempt to keep industrial production within "old established" feudal limits and to integrate the new production methods into the old system through circumscription of their scope.

The result of this mixture of tendencies in industrial production in eighteenth-century France may be observed in the following table:

\* A high degree of state regulation is usual also in a new society which still needs safeguards against counter-attacks from old elements, remnants of the formerly ruling class. See also vol. iii, 2, of this *Short History*, p. 25 f.

† It is not surprising to hear one of the progressive economists in France exclaim in his *Essai sur la Liberté du Commerce et de l'Industrie* (published 1775): "Give me back my freedom and monopoly is finished."

## IRON PRODUCTION (TONS)

<i>Year</i>	<i>Great Britain</i>	<i>France</i>	<i>Germany</i>
1700	12,000	22,000	10,000
1740	20,000	26,000	18,000
1790	68,000	40,000	30,000

Iron production in France doubled during the century—not a small increase; but, as compared with Britain where feudalism had lost out a long time before, progress was slow, and France, which in 1700 produced about double as much as Britain, was in 1790 about 40 per cent behind. But France also lost as compared with Germany, where feudalism was still much stronger than in France, and, consequently, not forced to impede production through so many “security measures” against a growing new production method, the bourgeois capitalist one.

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At the same time, the merchants considerably strengthened their economic position. Commerce throughout the land grew in volume, especially after the partial abolition of the numerous duties, road tolls, etc., levied within the country. Foreign trade, and the export of manufactured goods in particular, flourished and was many times larger than formerly.

Foreign trade was almost exclusively in the hands of the upper bourgeoisie, which, as far as home trade was concerned, controlled only the wholesale market, leaving the retail trade to the medium and petty bourgeoisie.

In retail trade, unfavourable conditions prevailed. There were too many retailers and activity was ham-strung by an organization similar to the guilds. Wholesalers, on the other hand, enjoyed a good deal of freedom and were able to speculate outrageously and earn enormous profits. Wholesale trade was so profitable as to induce even members of the nobility to sink capital in some undertakings, and Louis XV himself speculated in wheat and came out with a considerable profit.

But the development of the economic activity of the bourgeoisie was more clearly reflected in the growth of foreign trade. As mentioned above, this was largely concentrated in the hands of the upper bourgeoisie. A few firms still held a monopoly in some branches: in a number of towns, they alone were permitted

to import or export certain goods. However, this small group was not important enough to hamper the rapid development of foreign trade. And that development was, moreover, of a magnitude which permitted ample profits all round. For example, during the period of peace between 1715 and the beginning of the Seven Years' War it rose to three times its former volume.

Three major groups were engaged in foreign trade: those dealing in wheat; those dealing in food products other than wheat; and those dealing in manufactured goods.

Up to 1764, trade in wheat was strictly regulated. It was forbidden to export it freely—a prohibition which favoured the development of manufacturing in the towns, since it tended to keep the price of wheat relatively low. The reason for this prohibition, however, was not the political strength of the manufacturing bourgeoisie or the guilds, but the all too justified fear of famines. But even after 1764, wheat exports played a relatively minor rôle.

As for imports, the nature of the goods imported, or rather their allocation, changed a good deal in the course of the century. Imports of industrial raw materials increased rapidly, more rapidly than those of "food stuffs of all kinds." After 1715, about a fourth of all imports was made up of industrial raw materials, semi-manufactured goods and finished products. By the time the Seven Years' War had finished, the proportion of these goods had risen to one half of all commodities imported.

As to exports, a considerable quantity of industrial products—roughly one-third of all goods sent out of the country—was already being exported between 1715 and 1720. That quantity rose to more than 60 per cent in the years following upon the Seven Years' War.

This substantial expansion of foreign trade reflected the considerable increase in bourgeois economic activity as a whole, just as the steadily growing preponderance of the products of industry in foreign trade bore witness to the growing importance of the country's industrial production as compared with agriculture.

Certain towns—among them Montpellier, Aix, Amiens, Rouen, Nancy, Bordeaux, Lille—exported every year goods valued at several million livres. The conditions of development of the

manufacturing industry and the volume of exports were decisive for the well-being—or the contrary—of the people in these towns, or even of entire regions.

Wars had ceased to be the means of acquiring new arable lands; they were judged now by their effect upon the development of industry and commerce.

As the proportion of industrial products in the total volume of exports steadily increased, the ties of common interest brought closer to each other the manufacturing and the mercantile bourgeois, the producer and the seller. As a result, not only did each of the two groups increase in strength, but the economic foundation of the bourgeois class as a whole was strengthened because it had not only been expanded but had become more homogeneous and unified. And in the political field, the bourgeoisie was in time to become a far weightier factor, by virtue of these unified forces.

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Far ahead of both of these groups, the financial bourgeoisie rapidly grew in importance. Within a short time, it had succeeded in making for itself a place unique in the history of the eighteenth century.

After the speculations of John Law at the beginning of the Regency, the reputation of the banks had greatly suffered. They had to restrict their speculative activities. But before long, a new way was found for piling up millions, and without incurring the least risk.

In 1726, the Government returned to the method it had employed during the previous century for collecting taxes: indirect taxes were farmed out. A company limited to forty shareholders, or *Fermiers Généraux*, was established. It undertook to collect the taxes and to pay the state a fixed return each year. Whatever the company could collect, over and above this agreed annual return, constituted its profits; if it fell short of collecting the fixed sum, it lost by that much. But their risks were small: there were no competitors in the field, and care had been taken to fix the annual payment to the state at a low figure.

There are, of course, no figures of the profits made. But some estimates made by *Sénac de Meilhan* seem reasonable enough.

He calculated that the profits of the forty shareholders, and of their assistants and agents—about 800 persons in all—amounted to 1,132 million francs in the period between 1726 and 1754. During the following years, profits fell owing to the fact that the *Fermiers Généraux* had to guarantee a higher payment. Still, between 1754 and 1776, they pocketed about two-thirds of their former profits so that in the fifty years from 1726 to 1776 the company booked a surplus of some 1,700 million francs. The category of subordinate-collectors (*sous-fermiers*) having been abolished later on, this sum was shared out among roughly 1,400 persons. Thus, the staggering sum of one and a quarter million francs represents the average yield per person connected with this flourishing undertaking.

These profits were of course not evenly distributed. Sometimes they dropped for the chief collectors to as low a rate as half a million; in other cases, they rose far above the average. For example, chief collectors Bernard and Montmartel pocketed thirty million each. For three other *fermiers généraux*, profits amounted to over ten million francs, for five of them eight million, and for fifty more, three to six million each.

The collectors enjoyed the protection of the king and his mistresses. At the Court and elsewhere in high circles they found all doors open to them, and they, in turn, entertained the highest nobility in their houses. Their children married into titled families, even if not into the very highest. And the Duke of Orléans and the "*fermier général*" Brissart even shared one mistress! Could their success be more complete!

The ruling class, following the example of the king and the king's mistresses, showered favours upon the *fermiers*. Small wonder, then, that the financial bourgeoisie felt honoured, and had nothing but the highest regard for the feudal aristocracy.

In general, during the eighteenth century (and in contrast to earlier feudal times) the aristocracy was wary of sharing the plums of office with offsprings of the bourgeoisie. Only very rarely did one still find a bishop or archbishop of middle-class origin, or a former bourgeois holding high army rank. Members of the bourgeoisie were received in the drawing-rooms of the nobility, but they were made to feel the difference between themselves and their hosts. In the case of the bourgeois

financiers, however, the nobility was quite ready to forget this convention.

The financiers, the aristocrats among the bourgeoisie, apparently formed a link between the two camps, the ruling class and the bourgeoisie.

But within a few years, the scene changed. The profits of the *Fermiers Généraux* "had become really exorbitant." Their way of life was a provocation and mockery for the rest of the bourgeoisie. Everybody knew only too well whence their money came, that they retained a large share of the taxpayers' money for luxury expenditure. More and more, they met with disapproval and more or less open hostility. About 1770, the king decided to drop them socially, and the nobility and clergy were not sorry to follow his example.

Nevertheless, they still wielded considerable power, and every year they collected huge profits. But the real joy had gone out of life for them; they now had to act with so much circumspection, since the public had become so obviously hostile.

During these critical years, the financial bourgeoisie discovered new sources of profit. By now, enough time had elapsed since the speculation scandals of Law, so that the banks could again face the light of day. A banker was no longer regarded naturally as a crook. Among the public, and even in "good society," people were again taking an interest in speculation.

The *Fermiers* began to broaden the sphere of their influence: they saw to it that members of their families were at the head of the important banks. New banks sprang up, and the young banker (i.e. young bourgeois) managed to gain admission to the drawing-rooms of the "best people" and, at the same time, to dip deep into the pockets of these same people.

A certain young man arrived in Paris from Geneva. He had not much money but came with good letters of introduction. Within a few years, he had made millions. His name was Necker. There were others, many of them; but his was perhaps the liveliest brain and the luckiest hand.

Thus, the finance bourgeoisie, even though it lost some ground and saw its revenues as tax-collectors decline, won new and important victories in other fields. The banks at long last overcame the long stagnation to which they had been condemned.

And their new victories more than compensated for losses which anyway consisted only of reduced profits. And if a Fermier Général was no longer so welcome in Court circles, his place was taken by his brother or son, a banker.

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Summing up, we find that early in the second half of the century the position of the bourgeoisie was as follows:

The corporative (or guild) bourgeoisie, which had formed part of the feudal system, had declined. This decline did not weaken the rest of the bourgeoisie but helped it to grow stronger.

The mercantile bourgeoisie, and, above all, the industrial bourgeoisie, made rapid progress. The growth of the industrial bourgeoisie emphasized the unfavourable effects of the restrictive measures which the feudal state imposed upon its economic activities. These rules and regulations were not broadly or severely enough applied to destroy the growing organism. On the contrary, both the industrial and mercantile bourgeoisie found it increasingly easy to evade the rules, though at high expense, to secure freedom of action and development. One cannot assert that no reforms at all were brought into being, and that the general tendency was purely reactionary. But the rate of bourgeois development, especially as regards the industrial bourgeoisie, was such that the feudal restrictions became increasingly irksome and led to more and more discontent, in spite of all reforms and concessions.

In addition, the bourgeoisie, conscious of the growth of its power and wealth, increasingly resented the class distinctions imposed by the nobility and the clergy—an expression of the distribution of political power—even though such distinctions were in some cases becoming less pronounced.

What matters is not so much the fact that this feudal society found itself compelled by the growing power of the bourgeoisie to do away with this or that obstacle in the path of bourgeois interests, but rather the fact that the economic organism of the bourgeoisie expanded far more rapidly than did the narrow feudal *ordre*, in spite of all attempts made to adapt the latter to the new situation. Repeated concessions did not prevent the industrial bourgeoisie from feeling that it was irksomely repressed.

The financial bourgeoisie enjoyed almost all the economic liberties it needed and could not complain that the feudal system represented a serious obstacle in its way—except as regards investments in manufacturing businesses, which were, however, relatively small. Nor did it suffer, to the same extent as the industrial bourgeoisie, from the social discrimination which the ruling class manifested towards all bourgeois groups.

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As to the peasants in the eighteenth century, their condition continuously declined after a certain recovery following the war and famine years in the beginning of the century. During good years they were worse off than they had been during the good years of the previous century, and when the harvest was bad even more persons died of famine during the eighteenth than during the seventeenth century.

In 1739, the Duke of Orléans showed the king a loaf containing no flour, and commented: "In my county of Touraine, the people have been eating grass for over a year." And when the king, in a sudden access of benevolence, interested himself in the condition of the subjects of the Bishop of Chartres, he was told: "The people eat grass like sheep and perish like flies."

Even worse misery prevailed in 1749. The peasants were so weakened by hunger that they could no longer work. In Rouen alone, 12,000 people went begging for bread.

The number of revolts was growing. In Normandy—to cite only one example—bread revolts broke out in 1725, 1737, 1739, 1752, 1764, 1765, 1766, 1767 and 1768.

The harvests went to pay for taxation—this was the chief reason for the peasants' misery. During the second half of the century, a new development set in: at a time when the value of arable land rose considerably, the nobility began to take land by force from the peasants. Especially they seized the common lands upon which the peasants had had the right to graze their flocks and cattle.

The conditions of the industrial workers also deteriorated. Real wages tended to decrease. Although production was increasing, there was much unemployment, owing to the fact that the country people were leaving their villages for the towns—in spite of all

feudal bonds. Those who had a job had to pay so much for their daily bread that they could not eat their fill.

The peasants and the workers had nothing left to lose—neither their land nor their jobs. There was nothing for them to risk, for they could not live on what was left to them.

### 3. THE CONDITIONS OF THE WORKERS

Feudalism during the greater part of the eighteenth century—and especially in its latter half—was in a process of disintegration. The weight of the bourgeois elements began to grow considerably, and, in addition to this, general disintegration, chaos and dissolution existed. Still relatively strong in 1715, it had become weak, senile and foul half a century later.

This also found expression in the status of the labouring classes. While feudalism was still strong, the workers had a fixed place in society. The majority of them worked under the guild system as apprentices and journeymen, with a fair chance to become masters in the course of time. Some of them worked under the peculiar conditions of industrial serfdom in the royal manufacturing establishments, or as servants and domestics. Not a few of them were part-time peasants—serfs, of course—who either worked part-time in industry while also working on the land—a parallel to this existed in Britain from the fifteenth to the eighteenth century—or, after having prepared their fields, worked in the months before the harvest and during the winter full-time in industry. The latter procedure was especially common in the case of miners.

But the dissolution of the guild system, accompanied by growing bureaucratic complexity and ossification, the fact that fewer and fewer journeymen found a chance to become masters, that the masters found less and less work for their apprentices and journeymen whose number increased more rapidly than production, and because of competition from establishments employing hundreds of workers each through home-industrial arrangements—all this led to the creation of a small secret army of hungry, often unemployed, but unbound workers. Their numbers were swollen by hungry peasants who succeeded in quitting the land, and by the growing number of small masters who became dispossessed.

While the rules governing apprenticeship and journeymanship became even stricter, they were observed less and less. A phenomenon typical of the dissolution of a society. While, for instance, it was forbidden for journeymen to work anywhere on any employment, except under a master, we find, during the second half of the eighteenth century, a rapid increase in the number of "chambrelans," that is: journeymen (and sometimes also runaway apprentices) working on their own, in their "chambers," as free workers. And to the degree of freedom corresponds the degree of their misery. The Marquis d'Argenson, for instance, notes in his *Journal*, March 15, 1753: "This suburb of Saint-Antoine is full of small craftsmen who are not masters of their craft; while Paris becomes wretched through the ever-increasing inequality of wealth, the commodities produced by these small craftsmen, less good in quality than those of the great masters, are selling very low."

In the metal industry and in the mines there also sometimes existed conditions which would permit us to speak of these workers as free: not bound by the customary rules of feudalistic industrial production. In most other manufacturing industries, however, we find the workers usually bound by severe rules to their employers, and restricted in all their activities.

If we compare conditions in France during the second half of the eighteenth century with those prevailing in Britain, we find that the free worker was practically non-existent. If we compare them with contemporary conditions in Germany, we can say that, in spite of the still broad rule of feudalism, there was a surprisingly large number of free workers in France. While it is impossible to give an estimate of their number, it would not be surprising if it surpassed 100,000.

The great majority of workers, however, were still working under feudal conditions, bound hand and foot to their employers. This majority could be found in every branch of economic activity, with the exception of coal-mining during the second half of the century, and perhaps iron-founding in the last few years before the revolution.

\* \* \*

How did conditions for the workers develop during the pre-

revolutionary period? Thanks to the great work done by d'Avenel\* we are in a position to make a rough study of the development of wages over the century as a whole. He gives not only data on wages, but also information on the cost of living so that we are able to compute real wages. In the first two of the following tables the figures are directly quoted as given by d'Avenel; the third is computed on the basis of data provided by him.

WAGES OF WORKERS, FULLY PAID (i.e. WITHOUT BOARD),  
1700 TO 1800

Years	Daily Wages of Male Workers (Francs)				Annual Wages (Francs)	
	Day Labourers and Agricultural				Workers	Day Labourers
	Workers	Masons	Carpenters	Painters	Male	Female
1701-25	0.70	0.98	1.00	1.04	175	93
1726-50	0.68	0.94	0.96	0.90	170	113
1751-75	0.75	0.90	0.92	1.12	188	117
1776-1800	0.82	1.15	1.20	1.25	205	125

The wages of what we would class to-day as skilled workers did not greatly differ from each other, and these wages, as well as those of the day labourers, were remarkably stable over the first seventy-five years of the century.

How did real wages develop? D'Avenel gives a table of wages of workers in general, expressed in purchasing power related to various commodities:

DAILY WAGES OF WORKERS AS EXPRESSED IN PURCHASING  
POWER RELATED TO VARIOUS COMMODITIES  
(MALE WORKERS, WITHOUT BOARD)

Commodity	1701-1725	1726-1750	1751-1775	1776-1800
Wheat (litre) .. ..	4.50	6.10	6.10	5.70
Rye (litre) .. ..	7.70	10.10	7.10	7.80
Beef (kilo) .. ..	1.62	1.78	1.56	1.24
Pork (kilo) .. ..	1.57	1.74	1.34	1.15
Wine (litre) .. ..	3.00	4.60	4.40	4.10
Butter (kilo) .. ..	0.93	0.61	0.61	0.63
Milk (litre) .. ..	4.10	6.80	6.80	5.40
Rent (cottage†) .. ..	13.00	13.00	9.00	9.00

\* Le Vicomte G. d'Avenel, *Histoire Economique de la Propriété, des Salaires, des Denrées et de tous les Prix en général depuis l'an 1200 jusqu'en l'an 1800*. The following figures are taken from vol. iv, pp. 574, 575, 579, and are based on data given on p. 576.

† Maison rurale.

From the above it is obvious that real wages increased after the low during the first quarter of the century, then declined again during the third quarter, and continued to decline during the fourth, though the decline during the last quarter was smaller than during the third. If we compare conditions during the first and last quarter of the century, we find that they were lower at the end than in the beginning of the period under review. Thus—if we exclude the reaction, following the exceptional period embracing the last few years of the reign of Louis XIV, during which the country was impoverished as a consequence of a whole series of wars—we find, that during the entire period, the purchasing power of the workers declined. A very rough summary of wage conditions is given in the following picture:

WAGES AND COST OF LIVING IN THE EIGHTEENTH CENTURY  
(1776-1800 = 100)

<i>Period</i>	<i>Money Wages</i>	<i>Cost of Living</i>	<i>Real Wages</i>
1701-25	82	78	106
1726-50	86	70	123
1751-75	88	86	103
1776-1800	100	100	100

According to this summary table, real wages increased by a little less than one-fifth during the second quarter of the eighteenth century, but declined during the third quarter even below the very low level of the first, and continued to decline slightly during the next one. During the half century from 1750, real wages were below the catastrophic level of the first quarter, which is the lowest on record during the period which one may call the embryonic phase in the history of French capitalism, beginning around the middle of the seventeenth century.

\* \* \*

If we turn from the development of real wages to that of the hours of work, we find a similar surprise—again a considerable difference from conditions in Britain, the United States and Germany. Again we find many cases in which conditions were much worse than in most other countries at that time. Marx says\* that in the second half of the eighteenth century the twelve-

\* *Capital*, Dent's edition, pp. 281, 282. See also vol. i, part 1, of this *Short History*, p. 46.

hour day was regarded as a relatively long working day in Britain; in France during the eighteenth century a twelve-hour day was normal and possibly even below normal.

In the mirror manufacturing establishments of Saint-Gobain the working day extended from five in the morning to seven in the evening. In Lyons an eighteen-hour day was not unusual. A police regulation in Versailles, introduced in the reign of Louis XVI, confirmed the fifteen-hour working day for many crafts. In Paris in 1776 the fourteen-hour day was usual in some branches of the paper and printing industry, and the sixteen-hour day in others; when workers in the latter tried to get better conditions, they were not only defeated but the working day of the former was lengthened. In the mines the usual working day was twelve hours.

There are three facts, however, which must be taken into account when we compare the working day in the eighteenth with that in the nineteenth century, or when we compare conditions in French and British manufacturing establishments. Firstly, the working day includes pauses for meals. The twelve-hour working day in the mines meant usually less than eleven hours actual work. While this working day is still very long, it compares favourably with the working day in the early nineteenth century.

Secondly, in the majority of cases, the workers had not to leave their working place in order to be at home. That is, at the moment they downed their tools they could begin to rest. In Britain they often had to walk considerable distances to and from the factories. In France they often either lived in their masters' houses or in the factories. In the above-mentioned mirror manufacturing establishments at Saint-Gobain, for instance, the workers lived with their families in the grounds of the factories, and if the worker wanted to leave he had to give two years' notice. A working day of twelve or fourteen hours in France usually meant that the worker had twelve or ten hours' rest per day, in addition to the meal-times which, however, were often very short.

One further important difference in conditions between the France of the eighteenth and the France of the nineteenth century must be taken into account. France in the eighteenth century was

a strictly Catholic country. As far as the working week was concerned, this had one definite advantage: it abounded in Saints' Days which guaranteed freedom from work. D'Avenel rightly assumes that there were only about two hundred and fifty working days in the year. Or expressed differently, the working week consisted, on the average of five days only. If we take this into account, we find that, while the working day in France was undoubtedly longer than in Britain, it is doubtful whether the working week was longer. The fact that in France the year had only two hundred and fifty working days, while it had about three hundred in Britain, makes a striking difference. If in France a worker works thirteen hours a day, this means sixty-five hours per week—really less than the British labourer worked who had an eleven-hour day but worked six days a week.

\* \* \*

Although our information on this subject is rather meagre for all countries, it is highly probable that child labour was more widespread during the second half of the eighteenth century in France than in other countries. Rouff,\* in his study of mining conditions in France, gives the impression that not only female, but also child labour was fairly usual in French coal mines during the eighteenth century. Godart† gives the following very interesting data on workers in the silk industry of Lyons, rightly regarding the whole household of the master-craftsmen as part of the industry, and thus including domestics among the workers.

#### WORKERS IN THE LYONS SILK INDUSTRY IN 1777

<i>Category</i>				<i>Number</i>
Apprentices	..	..	..	352
Journeymen	..	..	..	3,214
Children	..	..	..	3,823
Domestics	..	..	..	2,268

The number of children employed was greater than the combined figure of apprentices and journeymen. The dissolution of the system can be observed from the following table which gives the figures for 1788, one year before the revolution:

\* Marcel Rouff, *Les Mines de Charbon en France au XVIIIe Siècle, 1744-91*.

† M. Godart, *L'Ouvrier en Soie*.

## WORKERS IN THE LYONS SILK INDUSTRY IN 1788

<i>Category</i>				<i>Number</i>
Apprentices	..	..	..	507
Journeyman	..	..	..	1,796
Children	..	..	..	3,359
Domestics	..	..	..	3,351

The number of apprentices has increased while that of journeyman has gone down rapidly. The number of children has declined absolutely, but grown much relatively. It is now almost 50 per cent higher than the combined figure of apprentices and journeyman. Furthermore, the number of domestics is as high now as that of the children, and children and domestics combined are about three-quarters of the whole working force, excluding the masters and their wives.

Further data on the life of the workers are very meagre. Except for Paris, there does not seem to have been a tendency towards increasing congestion, though housing conditions were, of course, poor and unhealthy like those all over Europe. The clothing standard was low, but it does not seem to have declined through a lowering of the quality of the clothing provided—in probable contrast to food which seems to have declined in quality. Medical services for the working people were poor everywhere, and during the whole century, but there is no evidence of further deterioration as compared with the beginning of the century (nor of improvement).

But—and this, like the increasing rôle of the state in economic affairs and the rapid growth of monopolies, applies also to our own time—the social security of the worker declined, an obvious consequence of the stage of decay which feudal society had reached in France at that time. The dissolution of the guild system, the “proletarianization” of many masters, the difficulty encountered by journeymen in seeking work with a master, or in trying to exist as illegal free workers, led to unemployment. This growing army of the unemployed was occasionally swollen to two and three times its size or more by economic crises. The workers who, under “normally functioning” feudalism were secure from this trouble, were usually without means when unemployed, forced to beg or steal, or to vegetate on a dole which some organized charity sporadically gave them.

In the same way, the living conditions of the aged and the sick began to deteriorate through the dissolution of the feudal system. While it would be wrong to overestimate the effects of this dissolution, as many workers were still practically serfs, and enjoyed the small degree of security which serfdom gave them, it is necessary to point to the slowly but steadily growing number of those who lost this security, as a minor but not negligible factor in the deterioration of living and working conditions.

Those workers' organizations which existed were on the whole ineffective, often engaged in fratricidal conflicts, not rarely imbued with a spirit of what one may call "petty-feudalism." The development of capitalism had not progressed enough to enable them to see more than vaguely the direction which their fight for a better life should take. Even at that early date we already find some "machine-wreckers," and we see the workers sometimes on the side of the reactionary guilds against the rising class of industrial capitalists. Conditions were too complex, and the movement of really free labourers was too small, to bring about more than an occasional strike, often without progressive results.

When the Great Revolution came, the workers played throughout a minor rôle; even at its height they were at best an auxiliary force of the petty bourgeoisie. Their time had not yet come, their position in society corresponded to the still relatively small rôle of the big industrial capitalist. For usually only industrial capitalism, seldom agricultural capitalism, and never commercial and financial capitalism, produce a proletariat that counts.

## CHAPTER II

### THE ADOLESCENCE OF FRENCH INDUSTRIAL CAPITALISM, 1789 TO 1850

#### I. THE GENERAL ECONOMIC AND POLITICAL DEVELOPMENT

THE French Revolution of 1789 freed capitalists and workers from the yoke of feudalism. Feudal institutions were abolished. On August 4, 1789, the serfs were freed, after feudal dues and taxes had been already abolished in June. Within the following twenty months freedom of internal trade and foreign commerce was established; the guild system was dissolved; manufacture and the factory system were freed, competition became the guiding principle. Within a few years, in fact in the space of less than two years from the beginning of the revolution, the conditions were created for the free development of capitalist enterprise. With the exception of the Russian revolution of 1917 mankind has not experienced so quick and radical a change of social conditions as during the years from June, 1789 to March, 1791.

But while this change from feudalism to capitalism was terrific in its velocity and implications, it would be wrong to imagine that, where yesterday the feudal landlord still reigned supreme, to-day the industrial capitalist had taken his place. On the contrary, it took more than half a century until the industrial capitalist really took a decisive part in the formation of policy.

During the years of the revolution itself—that is during the closing years of the eighteenth century—first one class and group and then another became the preponderant factor, until in 1793 the broad masses of the bourgeoisie emerged as the decisive element. The short period from the spring of 1793 to the summer of 1794 was the greatest national and democratic phase of the revolution. It was followed by others in which the upper bourgeoisie regained an increasing part of the power they had lost, until, under Napoleon, a certain stabilization of the bourgeois régime was

reached in so far as the "lower classes" were definitely "put in their place." But the numerous wars, the crises and other economic difficulties, and often lack of man-power, did not make for general stability of economic and social conditions; and while the situation was almost fixed after 1794—in so far as the workers, peasants and petty bourgeoisie did not share in the ruling power—the various groups within the bourgeoisie, the capitalist landlord, the finance, commercial and industrial capitalists, all shared to a constantly varying degree in the benefits, economic and political, of the revolution. The briefest and yet the most accurate definition of the historic task fulfilled by the reign of Napoleon is given by Marx:\* "Napoleon established throughout France the conditions which made it possible for free competition to develop, for landed property to be exploited after the partition of the great estates, and for the nation's powers of industrial production to be utilized to the full. Across the frontiers he everywhere made a clearance of feudal institutions, insofar as this was requisite to provide French bourgeois society with a suitable environment upon the continent of Europe."

The emphasis of this statement is on "conditions which made it possible." For the wars and crises did not allow more than to establish conditions as pre-requisites. When, for instance, we examine the development of industrial capitalism during this period, and more particularly the development of manufacture, we are surprised at the slow pace of this development. This becomes especially obvious when we compare conditions in France with those in Britain and in Germany. One would expect the development in France to be more rapid, comparing the pre-revolutionary period with later years; and also as related to the development in Great Britain, because a capitalist régime had existed in Britain already for over a century and thus, there was no additional social reason for an accelerated development, while in France the change-over from feudalism to capitalism should have proved particularly stimulating. Comparing conditions in France with those in Germany, one would again expect a more rapid development in France up to 1807 and a relative slowing down later on, as then Germany might have been able to profit from the removal—at least partial—of feudal fetters.

\* *The Eighteenth Brumaire of Louis Bonaparte*, p. 24.

## VALUE OF ANNUAL PRODUCTION OF MANUFACTURES

	(Million £ Sterling)*		
Year	United Kingdom	France	Germany
1780	177	147	50
1800	230	190	60
1820	290	220	85

Between 1780 and 1800 the value of manufactures annually produced increased in Britain by about 30 per cent. The increase in France was just about the same—no added impetus through the overthrow of feudalism. Between 1800 and 1820 production in Britain rose by more than a quarter; in France by less than one-sixth; in Germany by two-fifths.

Pig iron production increased in Britain almost four times between 1790 and 1810—from 68 to 250 thousand tons; in France it increased only from 40 to 85 thousand tons, little more than a doubling of output. The manufacture of hardware rose in Britain from £15 to £20 million between 1780 and 1800—in France from £8 to £9 million; and from 1800 to 1820 by 50 per cent in Britain, from £20 to £30 million—but in France by little more than 10 per cent to £10 million; in Germany the figures for the same years were £3, £4 and £6 million. Even in the field of textile production the rate of growth in France remained behind that of Britain; the years from 1780 to 1800 brought an increase in France from £21 to £27 million, while in Britain it grew from £26 to £36 million.

None of these figures are very accurate. Moreover, production fluctuated extraordinarily from one year to another, with the demands of the war upon labour power, with the degree of political stability, and so on. On the whole, one can summarize the development during the years from 1789 to 1815 as follows: during the revolution production tended to increase only slightly. During the years from 1800 to 1811, production showed relatively rapid rises. From 1812 to 1815 production was on a low level, and in some cases was not much higher than before the revolution. This is well illustrated by a table on pig iron production, quoted from the National Archives, by E. Levasseur:†

\* Quoted from M. G. Mulhall, *The Dictionary of Statistics*, London, 1899, from which also the following data are taken.

† *Histoire des Classes Ouvrières et de l'Industrie en France de 1789 à 1870*, vol. i, p. 427.

# PIG IRON PRODUCTION

(Metric Quintals)

Year	Blast Furnaces	Pig Iron Production
1789	358	1,058,535
1811	487	1,623,228
1814	342	1,107,930

The value of foreign commerce was seriously affected by the war, and especially by British measures to stop France's overseas trade. It amounted, according to Levasseur,\* to 1,018 million francs in 1789, and to less than 600 million francs at the turn of the century, and did not again reach the pre-revolutionary level, even at its highest point under Napoleon—933 million francs in 1806; in 1814 it reached a new low, 585 million francs, or little more than half the 1789 level. It is obvious from this that the commercial bourgeoisie engaged in foreign trade, at that time sometimes suffered serious losses, and on the whole did not make much progress in the accumulation of wealth, as compared with pre-revolutionary years. The chief difference was in the right of free competition, the abolition of feudal trading privileges for certain towns and commercial houses.

The greatest changes took place in agriculture. This is not surprising, as the change in agriculture did not only mean the removal of feudal fetters from a largely bourgeois capitalist branch of the national economy, but the overthrow of feudalism in a largely feudal branch of national economy. Even when the feudal system is overthrown at so late a stage as in France—in a period when manufacture and home industry already play a considerable rôle—agriculture is still the chief beneficiary in the period immediately following the overthrow. Absentee feudal landlordism is partly replaced by active capitalist ownership. Although the distribution of the land did not benefit all peasants, a not inconsiderable number were able to acquire the land which they had tilled before for the feudal lord, and in addition often to increase their holdings. Although production methods made but little progress, and fertility per cultivated acre probably did not increase, more acres were cultivated, and had it not been for the serious shortage of man-power because of large

\* *Histoire des Classes Ouvrières et de l'Industrie en France de 1789 à 1870*, vol. i, p. 493, and vol. ii, p. 858.

scale military requirements, the production of agricultural goods would have increased materially. But the removal of numerous feudal burdens from the peasants was alone sufficient to make agriculture prosper in a way unknown during the whole of the eighteenth century. If under war conditions speculators, bankers, and certain branches of industry prospered considerably in the period from 1789 to 1815, it is equally important to note, that the most solid and enduring progress in this period was made by French agriculture. Here the foundations of capitalist economy were laid on a broad basis. While "la grande industrie," the factory system, was still in its very infancy, while commerce suffered seriously from external causes—and had never been so oppressed under feudalism as was manufacture—agriculture emerged from the period of the revolution and the Napoleonic régime as a strong and firmly based capitalist branch of national economy, surpassing in importance all other branches put together.

\* \* \*

The period from 1815 to 1830 is called that of Restoration. This we may take to mean more than just the restoration of the Bourbon dynasty. For not only were the Bourbons restored, but agriculture again reverted to an officially ruling position in the country—capitalist agriculture, of course, and not feudal agriculture.

The Bourbons and their coterie hoped to restore "the good old time" for the aristocrats. But, in spite of various attempts to re-introduce the system of feudal guilds and royal patents, they were unsuccessful. On the other hand, their inclination—based on feudal tradition—to establish their system on agriculture did not meet sufficient resistance, because it corresponded in a high degree to the distribution of social forces in France—except that it was capitalist and not feudal agriculture which became the basis of the new régime. A considerable amount of protective legislation for agriculture was introduced. The area cultivated increased. The yield per acre had a tendency to rise.

The only unfavourable factor—apart from poor harvests, which were not unusual under feudalism either—was the development of prices which fluctuated considerably between 1815 and 1819, declined somewhat and remained relatively low—

between 1820 and 1826, and rose again sharply in 1827 and 1828, remaining on a high level in 1829 and 1830. Under the Restoration, the potato became one of France's important agricultural products. Beet sugar production also began to spread during this period.

While the landed aristocracy became the chief political power in the country, the finance oligarchy, represented mainly by the banks, had already gained so much power under the feudal régime that it was difficult to relegate it to a very inferior position. Strengthened through war-time speculation and war profits under the Napoleonic régime, it had entered the Restoration period as a strong second to the agricultural capitalist power. The relations between the Banque de France and the Government were excellent, and the latter made much use of the former. Banks were now being established in the Provinces, the most important one in Bordeaux. The formation of joint-stock companies gave a new impetus to banking activities as well as to the Stock Exchange, at which the number of shares quoted increased from 7 in 1816 to about 50 in 1830. There was speculation *à la baisse* and *à la hausse*; and the names of certain financial operators such as Ouvrard and Laffitte became infamous throughout France.

Below the financial capitalist group, in the hierarchy of power, comes the merchant bourgeoisie. Foreign trade developed rapidly after the conclusion of peace, and much of the ground lost since 1789 was made good on the basis of much more favourable foreign political conditions. From a total of 621 million francs in 1815, the foreign trade of the country rose, with some fluctuations, to 1,201 million francs in 1825; during the next five years it fluctuated only slightly at this high level.\*

During all this period industry in its narrower sense—the factory system, manufacture, including home industry—continued to expand and grow; but the development was still relatively slow. It would be wrong, for instance, to estimate as equal the position of industry in Britain in 1830 and in France before the revolution of July, 1830. The July revolution brought to an end the predominant position of the landed aristocracy, including the bourgeois agricultural capitalists. But their place was taken

\* E. Levasseur, l.c. vol. i, p. 587.

by the financial aristocracy, while in Britain at the same time the industrial capitalists, with the factory owners at their head, began to play an increasingly important rôle.

Textile production by 1830 had little more than doubled as compared with 1780 (when feudalism still was supreme), while in Britain—where capitalism was already in power in 1780, and where production in that year was by about a quarter higher than in France—production during the same fifty years rose by about 200 per cent. Hardware manufacture in France during the same fifty years rose by little more than a quarter; in Britain it rose by more than 100 per cent. Coal production barely doubled between 1815 and 1830—German coal production had by 1830 almost reached the French level!

This does not mean that certain branches of industry did not make rapid progress—as, for instance, the cotton industry, nor that mechanization did not progress. Furthermore, it is true that a certain concentration of production in larger establishments did take place; and, in addition, there was a noticeable decline in the position of the home industry. Nevertheless, I believe that Henri Sée is justified in summing up as follows: \* “Although, in 1789, one could begin to notice the birth of the factory system (*la grande industrie*), small scale industry was still predominant; mechanization and industrial concentration were only in their early beginnings. During the period of the Restoration, there undoubtedly took place notable progress in mechanization, a more marked concentration, but the industrial revolution, which had already triumphed in Britain, was not yet fully accomplished.”

\*                    \*                    \*

“After the July Revolution,” Marx reports, † “when the Liberal banker, Laffitte, led his godfather, the Duke of Orléans, in triumph to the Hôtel de Ville, he let fall the words: ‘From now on the bankers will rule.’ Laffitte had betrayed the secret of the revolution.” “Lèse-Million” (Balzac, *Modeste Mignon*) becomes as great a crime as *Lèse-Majesté*.

The July Revolution represented the victory of the finance bourgeoisie over the landed capitalists. During the following

\* *La Vie Economique de la France sous la Monarchie Censitaire*, pp. 66-67.

† *Class Struggles in France (1848-50)*, chap. 1.

eighteen years, up to 1848, the financial oligarchy reigned supreme in France, subordinating to their own interests those of the rest of the capitalists. They joined with the railway kings in exploitation; in fact, they partly became railway kings themselves.\* They entered into alliances with some sections of the iron, steel and coal industries—alliances which were based to some extent on the rapid development of the joint-stock companies—and with sections of the defeated landed aristocracy. The majority of the industrial capitalists, however—especially the textile industry, the strongest single industry at that time—came by degrees into ever stronger opposition to them.

During this same period, the industrial development of France, especially the development of the factory system, took rapid strides. It is during these years that the industrial revolution was being accomplished, slightly less than twenty years later than in Britain and somewhat less than twenty years earlier than in Germany. The period from 1830 to 1850 in France can be roughly compared with that of 1815 to 1835 in Britain, and that of 1845 to 1865 in Germany.

Coal production which in the period from 1815 to 1830 had about doubled, rose between 1830 and 1850 by over 150 per cent; consumption of coal per head of the population developed as follows:

ANNUAL COAL CONSUMPTION PER HEAD, 1789 TO 1850†

<i>Years</i>	<i>Cwts.</i>	<i>Years</i>	<i>Cwts.</i>
1787-89	0.4	1821-30	1.3
1802	0.7	1831-40	2.0
1811-20	0.7	1841-50	3.5

The rapid development of industry during the thirties and forties is very well reflected in this table; for the use of coal is in these years a useful indicator of the growth of industry, especially mechanized large scale industry.

A few more data are sufficient to show the rapid development of industry. Beet sugar production rose from 6,000 tons in 1830 to 20,000 tons in 1836 and 26,000 tons in 1847. The mechanization of the textile industry made enormous progress; the number

\* An interesting formulation, showing the enormous influence of the new technical changes in the field of transport is to be found in Désiré Nisard's *Mélanges* (1833 ed. p. 370): "At present all poetry is on the prow of steamships or the rails of railways."

† Mulhall, l.c.

of spindles in Lille, for instance, rose from 180,000 in 1832 to 300,000 in 1844, and 400,000 by 1853, while at the same time the efficiency of each spindle is said to have increased by 50 per cent. In the paper industry, machine production was installed in four factories in 1827, in twelve in 1834 and in one hundred in 1848.

This process of the growth of concentration and mechanization was accompanied by the increasingly rapid decline of many home industries in the country: the position of rural small scale industry was markedly deteriorating—a process which could be observed a generation earlier in Britain. Factory production was coming of age, and with it the end was approaching of the supremacy of any other capitalist group. The revolution of 1848 helped to accomplish this. After 1848, during the second half of the nineteenth century, industrial capitalism, the factory system, the kings of coal and cotton, iron and wool, ruled in France, and all the other groups—the commercial, finance and agricultural capitalists—became their loyal allies, sometimes taking their place as full partners beside the “captains of industry,” but never again mastering them.

The rapid growth of the factory system did not mean that the other branches of national economy were stagnating; but that they were not developing as quickly. Foreign trade, for instance, developed as follows:\*

#### FOREIGN TRADE, ANNUAL AVERAGE BY FIVE-YEAR PERIODS

(Million Francs)			
1816-20	812	1836-40	1,765
1821-25	827	1841-45	2,170
1826-30	1,187	1846-50	2,258
1831-35	1,317		

Since 1827 it is possible also to compute an index of foreign trade in quantities:

#### FOREIGN TRADE, ANNUAL AVERAGE BY FIVE-YEAR PERIODS

(1900 = 100†)			
Years	Index	Years	Index
1827-30‡	8	1841-45	16
1831-35	9	1846-50	16
1836-40	12		

\* E. Levasseur, l.c. vol. i, p. 587; vol. ii, pp. 454, 858.

† Jürgen Kuczynski, *Weltproduktion und Welthandel in den letzten 100 Jahren*.

‡ Four years only.

Thus, the volume of foreign trade had roughly doubled as compared with the end of the preceding period—that of the Restoration.

\* \* \*

Surveying the development of conditions during the period from 1789 to 1850 we may summarize as follows:

Feudalism was completely swept away as a decisive factor in society within less than two years from the start of the revolution. During the revolutionary period various strata of society came to partial or complete power. With the Consulate the upper classes of the bourgeoisie finally established themselves. But it cannot be said that any particular group among them came to the forefront. The same holds true of the Empire phase of Napoleon's reign. Only under the Restoration (1815–1830) are we able again to single out one group as supreme: the landed aristocracy. But, especially in its last phase, the position of this group was being undermined by the financial capitalists (under the leadership of *Sa Divine Altesse Madame la Banque*—as Balzac says so aptly in *La Cousine Bette*) which gave the keynote to the succeeding régime, the July monarchy (1830–48). Under the July monarchy the factory system began to make rapid strides. Productivity increased and mechanization spread,\* the factory system definitely began to relegate small industry in general, and rural home industry in particular, to a minor position. The industrial revolution was coming to its end. The period of transition to mature industrial capitalism, under the leadership of the “captains of industry,” was ushered in by the revolution of 1848, although at that time this was not clear, and many issues, facts and complex problems seemed to indicate a different development. But the result of the revolt of the workers in 1848 was the ushering into the world of the reign of the French industrial bourgeoisie. “The period of revolutions from below was concluded for the time being; there followed a period of revolutions from above.”†

\* It is interesting to note that in 1844 the French Academy proposed as subject of the annual poetic contest the discovery of steam. It is just as interesting that so little interest was aroused by this idea that it took three years until a sufficient number of poems were available to distribute a prize.

† Fr. Engels, 1895—introduction to *Class Struggles in France*.

When we study in the following pages the development of labour conditions, we shall have to follow not only the development of wages and hours of work, of health conditions and the general standard of living; we also shall have to investigate whether these developments are related to the various stages through which French bourgeois society went during these sixty years. Did the methods of exploitation change from the revolutionary period after 1789 to the July monarchy? Were the methods of exploitation different under the reign of the financial capitalists and under the landed aristocracy? Did the phase of preparation of industrial capitalist domination during the forties lead to changes in the methods of exploiting the workers?

While the study of these questions has already occupied us in former volumes of this short history of labour conditions under industrial capitalism, and while especially in the case of Germany it has led to a number of interesting results (as we had statistical data for Germany which we did not have for Britain or the United States), it is France, which in certain respects, ought to afford the most ample information. For the early history of industrial capitalism in no other country affords us the opportunity to study variations in labour conditions and changes in the methods of exploitation under such varied and often, in many respects, dissimilar phases of social history.

## 2. THE DEVELOPMENT OF LABOUR CONDITIONS DURING THE REVOLUTION, THE CONSULATE AND THE EMPIRE (1789 TO 1815)

It is not possible to contrast labour conditions during the first decades of the dominance of French capitalism with a past period similar to the relatively stable conditions under agricultural capitalism in Britain during the first half of the eighteenth century. Nor can we compare them with a state of affairs similar to that existing in Germany during the second half of the eighteenth century, when feudalism was still strong enough to guarantee to the peasants, the rural home workers (who usually were also peasants) and the guild and manufacturing workers, a certain degree of social security.

We have seen that French feudalism before 1789 was in such a state of disintegration that it was no longer able to guarantee

existence to its working population, to its objects of exploitation. While the introduction of industrial capitalism in Germany and Britain brought the workers, on the one hand, a number of new rights and/or the preliminary conditions permitting them to prepare for their final liberation, and on the other hand, a rapid deterioration of their economic status, increasing misery and social insecurity, in France the working people benefited politically more than in Britain and Germany while their economic status did not markedly deteriorate.

Of course, the years of revolution and wars up to the end of the eighteenth century did not bring a rapid improvement in conditions. While the position of the peasants and of the agricultural workers improved, it is doubtful whether the industrial workers made any appreciable gains. But, on the other hand, it would be wrong to speak of a marked deterioration of their economic status. There was less social insecurity and unemployment than before. The new freedom of the revolution brought also new security. And while the general standard of living in some years was poor when the rapid rise in prices and bad harvests made for low real wages, in others, conditions were definitely better than before the revolution.

As soon as the French people were forced to defend their newly won freedom against world reaction in the course of long-drawn-out wars, and many able-bodied men joined the forces, unemployment quickly dwindled and in many places, especially in the country, a labour shortage occurred. This alone contributed to an increase in security and rising wages.

It cannot be our task here to follow in detail the development of labour conditions from year to year during the revolution, although such a study would also be of the greatest practical use to-day and in the near future. It is not practicable here to study how the big bourgeoisie and feudal elements, together with purely adventurous speculators, tried to stop the progress of the revolution by withholding grain and forcing up prices in order to turn the masses against their leaders, and how in some years, therefore, we find real misery in spite of a good harvest. It is not possible for us here to examine in detail how many employers shut down their factories, thus creating local mass unemployment, in order to drive a wedge between the masses of the people

and the leaders of this great progressive movement. Moreover, a considerable amount of material which is available in the National Archives of France is at present not at our disposal as it has not been published. But it is possible to give a rough comparative summary of conditions in the beginning and at the end of the revolutionary period.

It would be wrong to say that the workers, by the end of the century, had secured those gains for which they had hoped, gains which the bourgeoisie had promised them, and which found expression in the "programme-demands" or "cahiers" of 1789, namely: a subsistence minimum, guaranteed through a fixed minimum wage, and security against unemployment. But in a number of respects their living conditions actually had improved. In the early stages of the Consulate real wages were on the whole somewhat higher than before the revolution. The working day in a number of cases was shorter. In the Paris building trades, for instance, it had been reduced from twelve hours, excluding meals, to twelve hours including two hours rest. The number of workers employed in manufacture, home industry, and agricultural work had considerably declined—but so had unemployment. The decline in the total number of workers actively employed in manufacture and home industry can be estimated to have amounted to not less than a quarter during the first six years of the revolution. This was due partly to sabotage on the part of certain groups of the big bourgeoisie and feudal elements, and also, of course, to some organizing inefficiency on the part of the authorities. To a large extent, however, the decline in employment was caused by the increasing demands of the army upon the male population. By the end of the century there was very little unemployment.

Thus we note three facts of importance when we compare conditions in 1789 and 1799: a certain increase in real wages per day; a somewhat shorter working day, and a definite decline in the number of unemployed.

We have no definite information on one important point which, in later years was to contribute much to the deterioration of the workers' conditions. This was the increase in the employment of children. Employment of children below the age of ten seems to have been a relatively rare occurrence. And as to older chil-

dren, there is at least no evidence that an increasing percentage was employed.

On the other hand, it is necessary to indicate two facts which contributed to a deterioration in conditions. The one is, that the number of free days declined with the decline of the position of the saints. It is improbable that the number of revolutionary holidays made up for the former Saints' Days. Therefore, it is not improbable that the number of hours worked per week increased or decreased but very little, although hours worked per day, on the average, declined not inconsiderably in a number of occupations and industries.

The second, and highly important anti-labour development was the Chapelier Law, introduced in June, 1791, which forbade all associations of workers as well as of employers; this law in later years was almost completely ignored when employers joined against the workers, but was always employed drastically against the workers. Thus, these early years of the new freedom of the industrial worker also produced legislative action to deprive the workers of the right of free association. As under the feudal régime, workers striking in joint action for better wages and living conditions were regarded as seditious and mutinous elements.

To summarize the results of the Revolution upon the working and living conditions of the workers we can say that there was a slight improvement in their standard of living, and probably in their working conditions, and an enormous improvement in their political and social status through liberation from numerous feudal fetters—and this in spite of the continued and legally newly established impediments to their organization for joint action.

\* \* \*

Under the Consulate and Empire (1799-1815) conditions became more "regularized." While wars and bad harvests still materially influenced the conditions of the workers, the important factor of sabotage by reactionary and feudal elements was eliminated. Under these circumstances, general economic activity, and consequently employment, began again to increase.

No general data on employment are available for the country as a whole, but some figures for cloth and woollen manufacture,

the most important branch of the textile industry, give some indication. According to the statistical survey of the *Comité de Salut Public*\* employment in this industry had declined from about 600,000 workers before the revolution to some 320,000 workers in 1796. This decline was very unevenly distributed over the country; in some districts employment had remained roughly stable, in others, for instance the Loire-Inférieure, the industry was almost destroyed; employment in this Department declined from 8,570 to 717, the war in the Vendée having led to complete destruction of the factories in most regions. The *Moniteur* of December 25, 1810, p. 1,430, gives the following data on the cloth industry of Rheims:

Item		1789	1804	1810
Number of looms	.. ..	4,750	3,166	3,166
Number of workers	.. ..	39,500	24,000	37,500
Number of pieces of cloth	.. ..	78,446	46,316	75,100

By 1810 the woollen and cloth industry had recovered, and, in spite of the large armies maintained by the country, employment had again reached the pre-revolutionary level. Although we have no detailed data for most other industries, it seems probable that total industrial activity in France in 1810, including the war industries, was considerably greater than in 1789.

The increasing and widespread scarcity of labour under the Consulate and Empire, combined with the demand for increased production, led to a rapid growth in the employment of women and children. While it seems doubtful that there was any marked increase during the years of the revolution, all evidence available points to a rapid influx of women and children into industry under the régime of Napoleon.

The wages of women and children were low, not only absolutely, but also in relation to those of men. D'Avenel† estimates the wages of women at about 60 per cent of those of men during the second half of the eighteenth century. From the data we have for the textile industry, women's wages under the Consulate and

\* This survey was never completed. But the National Archives of France possess a résumé for the cloth and woollen industry which is partially published by E. Levasseur, l.c. vol. i, pp. 267-68.

† L.c. vol. iv, p. 575.

Empire were often less than 50 per cent of the men's, and children's wages often less than half of those of women. This decline in the relative wage position of women, the incredibly low wages paid to children, and the continued recruitment of men for the army undoubtedly contributed to increase the proportion of women and children employed—although in some branches of industry children had already formed a considerable part of the workers before the revolution.

As to wages in general, we have a little more material than for the preceding years. The following table gives some estimates for the most important industries:

ESTIMATE OF WAGES BY INDUSTRIES, 1789 AND 1800 TO 1810  
(1850 = 100)

<i>Year</i>	<i>Building</i>	<i>Metals</i>	<i>Mining</i>	<i>Textiles</i>
1789	69	75	52	181
1800	81	100	—	—
1801	—	—	68	191
1802	—	—	68	—
1805	83	—	74	—
1810	89	92	84	200

The two industries in which wage movements during the period under review can be regarded as "normal" are probably mining and building. The only general conclusion which we can draw is that money wages tended to increase. That, for some time at least, they increased above the average in the metal industries, is not surprising, as the nation was engaged in so many wars. And although war production in the eighteenth and nineteenth centuries was small in relation to total national production, as compared with our times, it considerably affected the metal industry, and made for less unfavourable war-time wages in this industry as compared with others. The fact that wages in the textile industry tended to increase less than in other industries, and that they were so much higher than those of the base year 1850, is explained by the decline in rural and home industry in general, caused by the process of mechanization. It is of interest, in this connection, to compare wages in the textile industry of Britain and France during the same period; for in Britain we can observe a similar process, and in spite of the somewhat earlier and more intensive process of mechanization in Britain, the

situation in this respect was not fundamentally different in the two countries:\*

### WAGES IN FRENCH AND BRITISH TEXTILE INDUSTRIES

(1850 = 100)

<i>Year</i>	<i>France</i>	<i>Britain</i>
1789	181	—
1797	—	177
1801	191	175
1805	—	217
1810	200	148

At the turn of the century, wages in both countries were little less than double those of 1850. But while in France the rapid decline in wages took place only in the second half of the twenties, in Britain, after having reached an index figure of 217 in 1805, wages fell rapidly in the succeeding years.

General wage data can be computed for a somewhat greater number of years than for individual industries, as we can supplement the wage data for individual industries with fairly reliable summary data for some departments. Computing a combined index for regions and individual industries, we arrive at the following figures:

### ESTIMATE OF AVERAGE WAGES IN FRANCE.

1789 AND 1800 TO 1810

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1789	37	1805	46
1800	43	1806	45
1801	43	1807	45
1802	43	1808	45
1803	44	1809	47
1804	44	1810	49

During the first ten years of the nineteenth century wages had a tendency to increase. In 1800 they were roughly one-sixth higher than before the revolution. By 1810, they were again more than 10 per cent higher, a total increase of roughly one-third.

Unfortunately, our data on the development of the cost of living are even less reliable than our wage data. The following

\* Cf. vol. i, part 1, p. 56, of this *Short History*.

estimate of the cost of living can perhaps serve for a rough comparison with wages:

ESTIMATE OF THE COST OF LIVING, 1789 AND 1800 TO 1810  
(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1789	68	1805	70
1800	71	1806	68
1801	73	1807	67
1802	80	1808	68
1803	83	1809	65
1804	80	1810	70

The cost of living fluctuated, it seems, considerably more than wages. The following table gives the data on real wages which we were able to compute on the basis of the material on wages and the cost of living at our disposal:

ESTIMATE OF REAL WAGES, 1789 AND 1800 TO 1810  
(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1789	54	1805	66
1800	61	1806	66
1801	59	1807	67
1802	54	1808	66
1803	53	1809	72
1804	55	1810	70

Real wages seem to have increased not inconsiderably during the period under review. In 1800 they were more than 10 per cent higher than before the revolution and during the following ten years they seem, after an initial decline, to have increased by roughly 15 per cent. In 1810 real wages seem to have been higher by roughly one-third than before the revolution. In the following years, however, real wages declined again. This was due partly to price increases, and partly to one factor which, unfortunately, we cannot take into account in our above computations, namely, unemployment, which in some years was quite high, especially in the industrial towns, in spite of the large intake of recruits into the army.

Employment in Gand, in the cotton industry, for instance, fluctuated as follows:\*

\* M. Varlez, *Les Salaires dans l'Industrie Gantoise*, annexe 3.

Second half, 1810	9,696
First half, 1811	7,725
September–December, 1812	7,804
January–April, 1813	5,480

It is impossible that these sharp fluctuations were due exclusively to fluctuations in recruitment. Crises and consequent unemployment must have played some part in this. In the beginning of 1813, about one-third of the workers in Paris were unemployed.\* This figure is too high to apply to France as a whole, as Paris under the Consulate and the Empire became more and more overcrowded; between 1801 and 1811 its population increased from about 550,000 to 690,000. But there is no doubt that, in spite of the constant drain of the army, there were years in which unemployment rose sharply and economic insecurity was greatly intensified; sometimes it was even greater than before 1789.

While road-building and other public building works were increased, the number of dwellings for the masses of the people remained insufficient. It is doubtful whether, on the whole, housing conditions had improved in comparison with pre-revolutionary years; in fact, as far as the towns were concerned, the evidence points to a deterioration in housing conditions.

As our information on the living conditions of the workers before 1789 is meagre, it is not possible to produce a reasoned statement on the comparative development of labour conditions for the following quarter of a century. But we can say that all the evidence points to slightly improved material levels and greatly improved moral-political standards of the workers.

### 3. THE DEVELOPMENT OF LABOUR CONDITIONS DURING THE RESTORATION PERIOD (1815 TO 1830)

Under the Restoration the development of labour conditions in France definitely joined the general trend noticeable in Britain or the United States, Germany or any other country where industrial capitalism began to grow in influence and importance: This trend was in the direction of a deterioration in conditions.

Generally we find that numerous independent craftsmen—

\* E. Levasseur, *l.c.* vol. i, p. 506.

and especially in the textile industries, a very great number of small masters—joined the proletariat, a growing number of peasants' children left the countryside for the towns to engage in industrial work; an increasing proportion of the family, first the wife and then more and more children became wage earners. Thus, the number of people engaged in industrial work rose considerably. This growth in the number of industrially employed workers went hand in hand with a greater mobility of labour. And while the introduction of machinery on a widening scale increased the productivity per worker, the tendency to employ more and more women and children, combined with a lengthening of the working day, tended to decrease productivity per hour.

The increase in the number of factories, and in the capacity of the individual factory as measured by the number of employees tended to affect adversely the working conditions and also the workers' health.

To this we must add that real wages declined and social inequality increased. In fact, while it would be wrong to say that the Restoration restored living and working conditions of pre-revolutionary years, it definitely restored their downward trend, observed during the decades preceding the revolution.

Unfortunately, our information on the year to year development of labour conditions for this period is very poor. Or, rather, nobody has taken the trouble to gather together the information which is available in local publications (reports of chambers of commerce, acts and decisions of the prud'hommes, newspapers, etc.). The work accomplished almost a hundred years ago by Levasseur is not only still the best as a purveyor of facts, but unfortunately is still used largely as a core around which to write new books, without adding much but verbiage. Furthermore, in the period under review, the great tradition of revolutionary and early Napoleonic statistics was not maintained, except in later revolutionary periods such as 1848. While it is not surprising that during the last few years of the Napoleonic régime the collection of statistics was severely neglected, it is a bad fault of French study of economic history that no attempt has been made to make up for the scarcity of general official statistics—caused by wars and the progress of reaction between 1811 and

1815, and the triumph of reaction between 1815 and 1830—by a careful study of the unofficial data available.\*

The following table of estimates of the development of wages under the Restoration is the most complete compilation available, but, even so, it is far behind what, in my opinion, could be done by careful perusal of the material available in France:

#### ESTIMATE OF WAGES BY INDUSTRIES, 1810 AND 1817 TO 1830

(1850 = 100)

<i>Year</i>	<i>Building</i>	<i>Year</i>	<i>Building</i>	<i>Year</i>	<i>Metals</i>	<i>Mining</i>	<i>Textiles</i>
1810	89	1824	104	1810	92	84	200
1817	81	1825	107	1820	85	—	—
1818	81	1826	107	1825	127	80	181
1819	89	1827	100	1826	113	—	170
1820	89	1828	94	1827	107	76	155
1821	94	1829	93	1828	107	—	143
1822	96	1830	85	1829	90	—	143
1823	102			1830	82	—	132

Wages during the period under review have fluctuated considerably. While the level in 1820 was about the same as in 1810—the wages of building trade workers seem to indicate that there was a fall after 1810 and a rise in the last few years of the decade—the first half of the twenties shows a sharp rise in wages which in turn was followed by a fall, bringing the wage level down to less than that prevailing in 1810 or 1820.

The movement of wages in individual industries seems to have been even more varied than during the preceding period; the following table, giving wages for selected years, shows this very clearly:

#### WAGES BY INDUSTRIES IN SELECTED YEARS

(1850 = 100)

<i>Year</i>	<i>Building</i>	<i>Metals</i>	<i>Mining</i>	<i>Textiles</i>
1810	89	92	84	200
1820	89	85	—	—
1825	107	127	80	181
1830	85	82	—	132

While the building and metal industries show the same trend, the fluctuations of wages seem to have been sharper in the latter than in the former. The mining industry—and this is not surprising in a period of relatively slow industrial development, especially

in the case of the relatively slow introduction of machinery and steam power—seems to have been in a depressed condition between 1810 and 1825; the upward trend of wages which we observe in other industries, and which we noticed in mining too in the preceding period, seems to have been reversed, and while wages in building in 1825 are about 20 per cent above the 1810 level, and in metals the rise has been more than a third, mining wages seem to have declined. In the textile industry wages have declined rapidly. Up to 1825 the decline appears small—10 per cent as compared with 1810—but it was considerable as compared, for instance, with the wages of metal workers which rose by more than one-third, and those of building trades workers which rose by one-fifth; even in mining the decline was only 5 per cent. If we study the last few years under review, we get an even more pronounced impression of the fall of wages in the textile industry. While the depressed coal-mining wages declined only a little, and wages in building fell by about 20 per cent, textile wages decreased by little less than metal wages, which, however, were only about 10 per cent lower in 1830 than in 1810 while textile wages were one-third lower.

The decline in textiles is due, of course, to the special development of this industry. It is the only one in which the factory system spread rapidly, and the independent craftsmen were more likely to vanish quickly in this than in other industries because of the rapidity of technical progress in this branch of industry. To this must be added the specific pressure upon wages in this industry, connected with the technical possibilities provided by the introduction of the factory system and the relatively easy handling of the machines—all of which in turn led to an increase in the employment of women and children in all its branches. It was the same as in Britain: the fact that women and children could be so easily, productively and profitably employed was used to depress the wages of the men. Whereupon the men were forced to send their wives and children into the factories.\* The decline in the rural and home industry also had its parallel in Great Britain and Germany.

Combining all the wage data at our disposal for individual

\* Between 1825 and 1830 wages of men declined by more than one-third, those of women by one-fifth only.

industries and whole regions of France, we arrive at the following estimate of average wages:

# ESTIMATE OF AVERAGE WAGES IN FRANCE,

1810 AND 1820 TO 1830

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1810	49	1827	52
1820	46	1828	51
1825	57	1829	48
1826	56	1830	45

Like that of the individual industries, the general development shows a rapid rise in wages between 1820 and 1825, followed by a corresponding decline in the following years. It may easily be possible that our figures somewhat exaggerate the rise, as they are overweighed with factory and city wage data; but it is improbable that they are far out.

As to the cost of living data, the material at our disposal is barely better than for the preceding years.

# ESTIMATE OF COST OF LIVING, 1810 AND 1820 TO 1830

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1810	70	1827	74
1820	75	1828	76
1825	72	1829	77
1826	71	1830	78

If we now compute, on the basis of the above estimates, some real wage data, we get the following:

# ESTIMATE OF REAL WAGES, 1810 AND 1820 TO 1830

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1810	70	1827	70
1820	61	1828	67
1825	79	1829	62
1826	79	1830	58

While the figures for 1825 and 1826 are probably too high for real wages of fully employed workers, the tendency shown, indicating a sharp rise of real wages between 1820 and 1825-26, even above the level of 1810, is certainly correct. If we attempt

to compute some averages for decades, we may assume the following figures to be indicative of the development of the purchasing power of fully occupied workers:

ESTIMATE OF REAL WAGES BY DECADES, 1789 AND 1800 TO 1830

(1900 = 100)

<i>Decades</i>	<i>Index</i>	<i>Decades</i>	<i>Index</i>
1789	54	1810-19	55
1800-09	62	1820-29	70

These wage data do not take into account changes in the composition of the working force by sex and age. It is impossible to give even rough estimates of the influence upon average wages of the growing employment of women and children. But, as women received only about 50 per cent of men's wages and children in turn only about 50 per cent of women's wages, it is obvious that this influence must have been considerable and could have cancelled out most of the increase between 1810-19 and 1820-29. Furthermore, the above figures are mainly based on daily wages, and do not take into account the fact that the number of hours worked per day had increased considerably during the period under review; as compared with 1789, also the number of days worked per week. Furthermore, as unemployment played a greater rôle, from 1810 to 1830, if spread over the whole decade, than during the first decade of the century, it should not be surprising if more detailed investigation than is at present possible would show that hourly real wages have shown a tendency to decline continuously, as compared with the period from 1800 to 1810. In this way, then, the development of real wages in France, after 1800, would chime in with the movement in other countries, mainly in Great Britain and Germany.

While hourly real wages probably declined, and family wages increased in money as well as purchasing power terms, the working day was rapidly increased to the proportions familiar to us from the history of early industrial capitalism in Britain and other countries. It is not without interest to survey the development of the working day of the Paris building trade workers who were among the aristocrats of labour during the half century from 1780 to 1830:

## WORKING DAY OF PARIS BUILDING TRADE WORKERS, 1780-1830

Before the Revolution	..	14 hours, including 2 hours rest
Revolution and Napoleon	..	12 hours, including 2 hours rest
Restoration before 1820	..	13 hours, including 2 hours rest
Restoration after 1820	..	14 hours, including 2 hours rest

In the 1820's, the building trade workers in Paris had lost all the advantages gained through the Revolution. But even in the twenties their working day was short as compared with that of many factory workers. Furthermore, the gain during the revolution appears greater than it actually was, as the number of days worked per year increased through the elimination of many Saints' Days. This also means that conditions after 1820 were worse than before 1789.

Conditions were worst in the textile industries, where the working day reached fifteen, sixteen and even more hours. An employers' investigation into conditions in Mulhouse\* shows spinners working fifteen, sixteen and often seventeen hours per day. For many workers at least a further hour was needed for their journey to and from the factory. Rest periods during the day consisted of half-an-hour for breakfast and one hour for supper. In other regions of the country, the working day for textile workers was often somewhat shorter, but a working day of less than fifteen hours was rare in the textile industries.

Conditions in many other industries were better. In those, the fifteen-hour day was regarded as a long working day; the conditions of the Paris building trade workers, previously described, were not unusual in other branches of industry and other regions of France.

The same holds true of increased extensive exploitation through more employment of children and women, or of children at a still earlier age. The above-mentioned investigation by the Mulhouse employers' organization states that the children were employed usually from the age of eight or seven—about three years younger than the age of employment before the revolution; but there were, of course, cases—and not a few—of children being employed at an earlier age. But here again we must warn against generalizing conditions in the textile industries for industry as a whole. The number of children employed in other

\* Cf. *Bulletin de la Société Industrielle de Mulhouse*, vol. i, p. 377.

industries was considerably smaller than in textiles, both absolutely and relatively.

Two further factors must be mentioned which contributed much to a deterioration of living and working conditions. The first was the increasing deterioration of health conditions in the factories. This was not so much due to additional neglect, but to enhanced congestion and new problems arising from the growth of the size of the working rooms and the increasing use of more complex machinery. As the factories became more crowded the light, space, heating and air per person became less adequate. This contributed not only to a deterioration in health conditions but also to an increase in the number of industrial accidents. Also, the new methods of production contributed to the creation of new industrial diseases such as tuberculosis and others, partly due to the accumulation of dust from raw materials, as apart from the general condition of the factory rooms.

The second factor contributing to a deterioration of living conditions was residential congestion. The number of workers drawn to the factory towns from rural districts or neighbouring villages and small towns was increasing rapidly; the decline of rural and home industry made for a concentric move towards the towns. And as the working day was so long, the tendency to live close to one's work in the congested town dwellings became accentuated.

Thus, while, during the period under review, family real earnings undoubtedly increased and average real wages probably tended to decline, the workers' conditions as a whole must have deteriorated; for family real earnings were, in fact, the only item to show improvement during the Restoration as compared with the preceding period. There can be no doubt that on the whole, an absolute deterioration of labour conditions took place. This was especially the case in the chief factory industry of early capitalism, the textile industry, and also applies particularly to the life of the wives and children of the workers.

Lamennais who began as a Catholic reactionary and ended as a friend of the people, describes the conditions of the masses in his *Le Livre du Peuple*, by answering the question, what society does for them, as follows: "It condemns them to fight

incessantly against a multitude of obstacles of all kinds which it erects against an amelioration of their conditions, against a relief from their plight; it barely leaves them part of the fruits of their labour; it treats them as the labourer treats his horse or cattle, and often worse; it creates for them under various names a servitude without end and misery without hope."

#### 4. THE DEVELOPMENT OF LABOUR CONDITIONS DURING THE JULY MONARCHY (1830 TO 1848)

During the eighteen years now under review French industry developed with extraordinary rapidity until it had exhausted the possibilities of further applying the methods of exploitation used up to that time. This was the first fundamental crisis of industrial capitalism, which occurred because the ruling class could no longer use the methods of exploitation it had employed during the preceding half century, and because the workers were unwilling to endure any longer the system under which they suffered so greatly.

It is fortunate that for the period under review we have better material at our disposal on the development of labour conditions than for any preceding period. Not only are our data better on wages and the cost of living, but other aspects of the conditions of the workers are better known to us.

Let us begin with a survey of the development of wages, first by industries and then in general:

#### WAGES BY INDUSTRIES, 1830 TO 1850

(1850 = 100)

<i>Year</i>	<i>Building</i>	<i>Metals</i>	<i>Mining</i>	<i>Textiles</i>
1830	85	82	—	132
1831	85	82	—	132
1832	107	82	—	134
1833	107	95	96	134
1834	107	95	94	132
1835	—	—	—	126
1836	—	—	—	121
1837	—	95	—	113
1838	—	95	—	121
1839	96	95	—	115

WAGES BY INDUSTRIES, 1830 TO 1850—*continued*

(1850 = 100)

<i>Year</i>	<i>Building</i>	<i>Metals</i>	<i>Mining</i>	<i>Textiles</i>
1840	—	95	—	104
1841	—	97	—	104
1842	—	97	—	104
1843	—	97	86	100
1844	94	97	98	106
1845	94	97	—	96
1846	98	—	—	91
1847	100	—	98	83
1848	100	—	100	—
1849	100	100	102	—
1850	100	100	100	100

While wages in the building industry seem to have fluctuated more than in metals and mining, we can say that wages in building and metals have, on the whole, moved much in unison. The industry again showing a singular development is the textile industry, where the downward trend, observed during the preceding phase, has continued for the reasons mentioned above. This downward trend, during the years preceding the 1848 revolution, was so rapid that, in contrast to other industries, the wages of textile workers moved sharply upwards during the last few years under review.

The following table surveys the development of wages as a whole, including not only the above-mentioned industries but also wages of other branches of industry and regions of France:

## AVERAGE WAGES IN FRANCE, 1830 TO 1850

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1830	45	1841	48
1831	46	1842	48
1832	48	1843	47
1833	50	1844	50
1834	49	1845	49
1835	48	1846	49
1836	47	1847	48
1837	47	1848	48
1838	47	1849	49
1839	48	1850	50
1840	47		

Average wages were remarkably stable, covering upward or downward trends in this or that industry. The index fluctuated during all these years within very small limits, three times reaching the highest level of 50, starting with the low of 45 and, after having reached its first high in 1833, never going below 47 during the next seventeen years.

The index of the cost of living was much less stable than the average wage index. But one must always remember that while it is not unusual that a particular important industry does not follow the trend of the average wage index, the workers engaged in most industries suffer or sometimes benefit pretty equally by the fluctuations of prices indicated in the general cost of living index. For prices fluctuate pretty much the same all over the country.

#### THE COST OF LIVING, 1830 TO 1850

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1830	68	1841	76
1831	79	1842	79
1832	82	1843	77
1833	73	1844	84
1834	71	1845	83
1835	72	1846	89
1836	73	1847	94
1837	76	1848	83
1838	78	1849	81
1839	79	1850	80
1840	80		

During the thirties the cost of living first rose by about 20 per cent, then declined by almost 15 per cent and rose again by about 10 per cent. During the forties, after a slight decline, it rose by more than 20 per cent and then declined by about 15 per cent to the end of the decade.

The following table gives a rough survey of real wages as computed on the basis of the above cost of living and general wage indices. Because of the better quality of the wage and cost of living indices, the figures are more reliable than those for the preceding decades.

## REAL WAGES, 1830 TO 1850

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1830	58	1841	63
1831	58	1842	61
1832	59	1843	61
1833	68	1844	60
1834	69	1845	59
1835	67	1846	55
1836	64	1847	51
1837	62	1848	58
1838	60	1849	60
1839	61	1850	63
1840	59		

Like the cost of living, real wages have fluctuated considerably more than average money wages. In the middle of the thirties real wages were about 20 per cent higher than in the beginning; at the end of the decade, they had declined almost to the level of the beginning of the thirties. Between 1838 and 1845, real wages remained about stable, but then declined sharply, reaching in 1847 a level about a quarter lower than in 1834. By the end of the fifties they had again reached the stable level prevailing between 1838 and 1845.

Let us now study by decades and by trade cycles the development of real wages during the whole period under review. For only such a study, ignoring the changes between individual years and from the floor of the crisis to the peak of industrial prosperity, can inform us about the general trend of real wages, and thus give us an indication of the generally applied methods of exploitation in respect of real wages. This is all the more important, as we may be able to correlate such possible changes with changes of the particular circle of the ruling class at the helm.

## REAL WAGES BY DECADES AND TRADE CYCLES, 1789 TO 1851

(1900 = 100)

<i>Decades and Trade Cycles</i>	<i>Index</i>	<i>Decades and Trade Cycles</i>	<i>Index</i>
1789	54	1824-33	68
1800-09	62	1833-39	64
1810-19	55	1840-51	59
1820-29	70		

The continuous decline of real wages since the twenties is very obvious from this table; during the forties the purchasing power

of the workers was roughly 15 per cent less than during the twenties. Although the workers in the forties received probably somewhat higher real wages than during the period from 1810 to 1820—when so many wars were fought, and during which France suffered one of the severest defeats in her history—wages were lower in the forties than during the first decade of the century. If we keep in mind that these wages are usually based on data referring to the whole working day and not to the hour, and thus do not take account of the lengthened working day, if furthermore we keep in mind that they do not take into account the relative increase in the employment of women and children with their low wages, we can add two further points to the above observations: firstly, that when real wages declined, the decline was actually greater than the above figures indicate, and, secondly, that, when they increased, this increase, even at the best of times, probably does not refer to actual average hourly real wages.

Furthermore, while up to the twenties family real wages increased, because more and more members of the family were drawn into production, it is doubtful whether this factor was sufficiently influential during the thirties and forties to compensate in the weekly family income the trend indicated by the above wages data.

Finally, attention must be called to the fact that the above wages data do not include wage losses through short-time and unemployment. Thus, real wages per worker often show an increase which applies only to those who worked just as much during the crisis as during the preceding phase of trade prosperity. The majority of the workers, however, either works shorter or is not employed at all during the crisis. The movement of average wages is seriously influenced by these facts, as far as year to year changes are concerned, and to take into account such wage losses would often reverse the trend of wages between one year and another. As far as the trade cycle averages are concerned, however, these facts influence the trend of wages only in so far as unemployment and short-time increase or decrease from one trade cycle to another. And although such changes undoubtedly take place, they are small as compared with annual changes.

I should think it justifiable to say that unemployment and short-time during the trade cycle 1840-51 were on the whole greater than during the preceding one from 1833-39, while the losses between 1824 and 1833 surpassed those between 1833 and 1839. While one cannot say, therefore, that the volume of unemployment, as expressed in percentages of the total number of workers employed, increased from trade cycle to trade cycle, it is very probable that the absolute number of unemployed increased from one cycle to another, because the total number of workers increased considerably during the whole period under review, and a reduction in the percentage of unemployment (1833-39) probably did not go so far as to imply a reduction in the total number of unemployed.

But before we study in more detail the material available on unemployment it will be useful to pay some attention to the relative development of wages of men, women and children.

We had found that, up to 1830, the wages of women were very probably lower in relation to those of men than during the last half of the eighteenth century, and it is not improbable that the same holds true for the relation of wages of children to those of women. During the following twenty years the data at our disposal indicate that the relation between the wages of men and women has changed only slightly, perhaps with a weak tendency towards a relative increase of women's wages.\* At the same time the wages of children seem to have increased considerably in relation to those of women. While early in the century they were only half of those of women or less, and in the early thirties they were still less than two-thirds of those of women, it is not improbable that by the end of the first half of the century a considerable number of children's wages amounted to almost three-quarters of the wages of women, or somewhat above one-third of men's wages. Downward pressure on the wages of the men became less successful as means of recruiting women and children, and the employers were forced to raise the wages of children in order to get them into the factories in greater number. While the absolute figures are not representative of the whole of France, the following

\* In the cotton industry wages of women declined between 1830 and 1847 by one-third and those of men by one-half; a similar tendency we could observe in the textile industry already since the middle twenties.

wage figures for the cloth industry at Elbeuf may be taken as indicative of the trend of the relative development of the wages of men, women and children:\*

Category	Daily Wage in Francs	
	1804	1853
Men .. .. .	1.50	2.75
Women .. .. .	0.75	1.75
Children .. .. .	0.25	0.90

The wages of men increased by somewhat over 80 per cent, those of women by about 130 per cent, and those of children by 260 per cent. The survey for the years 1840 to 1845, covering 63 departments, and the results of the national survey of 1848 give the following figures for average wages of men, women and children:

#### AVERAGE WAGES OF MEN, WOMEN AND CHILDREN

(FRANCS PER DAY)

Category	Survey of 63 Departments		National Survey
	1840-45		1848
Men .. .. .	2.09		1.78
Women .. .. .	1.03		0.77
Children .. .. .	0.73		0.50

While the previous table referred to a single industry in one town, Elbeuf, this table refers to a national average. This influences the relation between the wages of men and women, as the chief industries in which women were employed were already paying lower wages in the forties. For instance, the inclusion of the metal industry with relatively fewer women employed and also with relatively higher wages for the men, increases the difference between the wages of women and men. While the above figures give a fair picture of the relation of wages for men and women in industry as a whole, they do not give adequate expression to this relation in the individual industries. This did not matter during the eighteenth century and during the first decade or two of the nineteenth century when wages in the textile industry were not very different from those paid in other industries, but it plays a rôle in the forties. If, therefore, the above figures show a decline of the relative position

\* A. Audiganne, *Les Populations Ouvrières et les Industries de la France dans le Mouvement Social du XIXe Siècle*, vol. i, pp. 82-83, 2nd ed.

of women to less than 50 per cent of that of the men, it does not mean that the position of the women in relation to that of men in the same industry has declined; it may even have improved.

The circumstances regarding the position of children in relation to that of women, however, are quite different as the children are usually employed in the same industries as the women, and therefore the average figures as above do not disturb or distort the relation between the wages of children and women. According to the above tables the wages of children are roughly two-thirds to three-quarters of those of women—a considerable relative improvement.

Later, when we study the reasons why it became less profitable for the employers to employ children, and why, therefore, the humanitarians (who for decades had fought against the exploitation of children) began to have more success, and also why, after the revolution of 1848, the employment of children in the factories and mines began to show a decline, it will be useful to keep in mind the fact that child labour became relatively more expensive as compared with women's.

The total number of children employed in the establishments employing ten or more workers in the sixty-three departments investigated for 1840-45, was 131,000 as compared with 254,000 women and 672,000 men. The percentage of children employed was roughly thirteen, or one-eighth of the total working force in the factories. In some branches the percentage was much higher—about one-third in the cotton establishments in the Upper Rhine region. When we compare this percentage, for instance, with that given before for the Lyons silk industry where the children formed the largest group of those employed, we must not forget that at that time the employers, usually small masters, often also worked with their wives alongside their employees, and with their wives played numerically a certain rôle in the total labour force, while, in the period now under investigation, the main adult working force was represented by employed workers.

\* \* \*

While real wages under the July monarchy declined, the length of the working day continued to increase. The only exception

to this was the textile industry where it was barely possible to add more hours, the maximum of physical endurance having already been reached around 1830. The period from 1830 to 1848 brings other industries, especially small establishments and home industry, not engaged in textile and clothing production, up to the level of the textile industry. Before the revolution of 1848, the thirteen-hour day was generally regarded as a short working day, the fourteen-hour day as more customary, and fifteen hours as not abnormally long. The length of the working day was generally the same for men, women and children. It was usual to rest on Sundays, but cases where the workers had no rest day, especially when working at home, were not infrequent. Piece-workers who earned more than workers paid by the day sometimes took Monday morning off in addition to Sunday; and an "early closing" on Saturday, after only ten or twelve hours work, was customary in some towns and regions.

On the whole, one can say that by the late forties the lengthening of the working day had reached its physical limit. As wages had reached a very low level, making it almost impossible for the workers to endure the strain of such conditions, the two chief elements determining at that time the standard of living and working could no longer be used as before further to lower the standard of the workers and increase the degree of exploitation.

It will be useful to present here some excerpts from a table illustrating this, although certain other elements in the standard of working and living are included in it. It clearly illustrates the necessity then existing for a change in methods of exploitation. It was prepared by one Doctor Penot, from the employers' point of view, and was intended to counter alarming statements on the state of health of the workers.

#### AGES AT WHICH 50 PER CENT OF PERSONS HAVE DIED AND TRADES PRACTISED BY THEM AND THEIR PARENTS

<i>Trade</i>				<i>Age</i>
Employers, large-scale	..	..		31 years 10 months
Tailors	..	..	..	7 years 8 months
Carpenters	..	..	..	5 years 2 months
Various factory workers	..	..	..	4 years 10 months
Iron workers	..	..	..	3 years 10 months
Weavers	..	..	..	3 years 10 months

These figures are based on the life experience during the years 1832 to 1841 and refer to Mulhouse. The child of a textile or iron worker, according to this table, has an average life expectation of not quite four years. This means that the employers cannot expect to get even half of the children of these workers into their factories, even if they take them on at the age of four or five. Thus, the very basis of exploitation was seriously menaced. Obviously the capitalist system could not continue as it had up to the end of the forties. A crisis had been reached in the system and its technique of exploitation. If the ruling class could not discover new methods, it would disintegrate. If, in addition, a strong working class movement were able to take over the government, a new and progressive type of society would be ushered in.

\* \* \*

But the development of real wages and the length of the working day were only the two most important factors making for a deterioration in the conditions of the workers. Another important factor was the increase in the number of the unemployed during the years of crisis and economic depression.

The extent of unemployment is well illustrated by the following items from a report of the mayor of Sedan, dated June, 1837:\*

Total number of clothing workers in Sedan ..	about 12,500
Unemployed 1830-31 .. .. .	about 7,500
Unemployed 1832-34 .. .. .	about 1,500 to 2,500
Unemployed 1835 .. .. .	about 3,500
Unemployed 1836 .. .. .	about 2,500
Unemployed 1837 .. .. .	about 5,500

It would, of course, be wrong to apply these figures to industry as a whole, or to the whole country. But these figures show the sharp fluctuations on the labour market, the high degree which unemployment could reach during a crisis—about 60 per cent—and the relatively high percentage of unemployment in some trades and regions even during years of relative prosperity.

Unemployment was especially high in those towns where the growth of industry had within a short time attracted a considerable number of workers. In the department of the Seine-

\* Quoted from the National Archives, by Levasseur, l.c. vol. ii, p. 265.

Inférieure, for instance, the number of cotton workers rose from 107,000 in 1833 to 130,000 in 1836. It is obvious, therefore, that the number of unemployed must have been especially high in 1837 when a crisis broke out. The number of industrial towns whose working population was increased by 50 per cent or more during the July monarchy is not small; it is especially high in those regions where the premier industry of the country and the age, the textile industry, was flourishing.

Under these circumstances it is not surprising that high unemployment coincides with severe congestion. And this deterioration in housing conditions again coincides with rents rising both absolutely and in relation to the prices of commodities.

While the people's health suffered from the effects of poor nourishment, over-long working days, and poor housing conditions, conditions in the factories added further to the toll taken by disease and exhaustion. Not only were the working conditions unsanitary, and the rapid introduction of machinery was leading to an increase in the number of accidents, but the actual processes of production were also causing new and dangerous forms of disease. While tuberculosis and eye-diseases were common among the textile workers, work in the chemical industry (particularly the production of matches) affected the stomach, teeth and skin.

\* \* \*

We will conclude this survey of general labour conditions under the July monarchy with a picture of workers entering a factory, drawn by Villermé,\* that great writer on labour conditions in the France of his day:

"One should see them arrive in town each morning and leave each evening. Among them are a great number of women, pale, thin, walking barefoot through the mud . . . and young children, still more in number than the women, not less dirty, not less pale, covered with rags, greasy with the oil of the looms which has splashed on them while they worked."—"These children not one of whom laughs" as Victor Hugo describes them.†

\* L. R. Villermé, *Tableau de l'Etat physique et moral des Ouvriers employés dans les Manufactures de Coton, de Laine et de Soie*, vol. i, p. 26.

† "Ces enfants dont pas un seul ne rit." (Melancholia.)

Almost at the same time in a report of the American National Trades' Union Convention we find the following description of the conditions of women workers in the textile village of Lowell:\*

"It is enough to make one's heart ache, said he, to behold these degraded females, as they pass out of the factory—to mark their wan countenances—their woe-stricken appearance. These establishments are the present abode of wretchedness, disease and misery."

And at about the same time also, Dr. Hawkins testified on conditions in Manchester before a Royal Commission:†

"I believe that most travellers are struck by the lowness of stature, the leanness and the paleness which present themselves so commonly to the eye at Manchester, and above all, among the factory classes. . . . I must confess that all the boys and girls brought before me from the Manchester mills had a depressed appearance, and were very pale. In the expression of their faces lay nothing of the usual mobility, liveliness, and cheeriness of youth."

We do not need to quote the testimony of the leading French academic authorities in order to realize that the July monarchy brought a very considerable deterioration of labour conditions. The few data I have presented are sufficient to make us realize the rapid decline in the standard of living, the growing misery and destitution, and the degradation of the status of the workers.

\*            \*            \*

If we now survey the development of labour conditions since the French Revolution of 1789 we can distinguish three different phases:

The revolutionary period and the reign of Napoleon: During this phase, labour conditions, on the whole, improved as compared with the preceding decades of the feudal régime.

The Restoration period: During this phase labour conditions deteriorated—in spite of an increase in real wages and in spite of the fact that this phase was free of war.

The July monarchy: Labour conditions deteriorated rapidly.

\* Cf. this *Short History*, vol. ii, p. 26.

† Quoted from Fr. Engels, *The Condition of the Working Class in England in 1844*, 1936 ed., pp. 158-59.

The factors which had led to a deterioration of labour conditions under the Restoration were still fully active, and as real wages declined, the conditions of the workers deteriorated with increasing rapidity. In this connection, it is perhaps of interest to compare the development of one of the most important factors in deterioration—real wages—in Britain, Germany and France during the period under review:

# REAL WAGES IN BRITAIN, GERMANY AND FRANCE,

1789 TO 1852

(1900 = 100)

<i>Decades and Trade Cycles</i>	<i>Britain</i>	<i>Decades and Trade Cycles</i>	<i>Germany</i>	<i>Decades and Trade Cycles</i>	<i>France</i>
1789-98	58	—	—	1789	54
1799-1808	50	—	—	1800-09	62
1809-18	43	—	—	1810-19	55
1819-28	47	—	—	1820-29	70
1820-26	47	1820-29	86	—	—
1827-32	48	1830-39	82	1824-33	68
1833-42	51	1840-49	74	1833-39	64
1843-49	53	1844-52	76	1840-51	59

In Great Britain, we note a not inconsiderable decline of real wages after 1789, interrupted by a rapid decline and then a slight increase, caused by the war years between 1807 and 1814 and the following years of peace. With the thirties wages showed a slight tendency towards an increase, although it was too slight, in view of the inexactitude of our wage data, to be taken as an indication of a definite change, from a decline into an increase in real wages. But there is no doubt that, at the end of the period under review, a new phase was in preparation, a phase in which the methods of exploitation were undergoing a change which includes the cessation of reductions in real wages and, in fact, an increase in the purchasing power of the working class.

No figures for the early years are available for Germany. But those for the years after 1820 show a continuous decline of real wages which continued beyond the period here under review. No indication is given that a change in methods of exploitation was approaching, as was the case in the figures for Britain.

In France the development seems different from that in Britain and Germany. It was different, indeed, at the very start. France is probably the only country in which industrial capitalism

brought an improvement of conditions, as compared with the preceding period of disintegrating feudalism—this in contrast to Britain where strong agricultural capitalism was dominant, and to Germany where feudalism, while not strong, was not as advanced in decay as in France, and in contrast also to the United States where the war against Britain was preceded by a period of relatively healthy economic growth.

The early period of the industrial revolution in France coincided with a period of wars which at first were successful and then ended in defeat. While wages all over Europe, in France, Germany and Great Britain declined during the decade from 1806 to 1815 as compared with the preceding decade, the rebound, as is usual after wars (whatever the general trend of real wages) was much greater in France than in Britain though probably not greater than in Germany.

In the years following this rebound, conditions moved similarly in Germany and in France: in both countries real wages declined, a reduction in real wages being one of the chief measures of exploitation. In Britain, the ruling class had already exhausted this method of exploitation for the time being; the standard of purchasing power had already been driven down so much (and the working day lengthened to such a degree) that the ruling class had been forced for these objective reasons as well as by the growing organized resistance of the workers, at least to refrain from any further reduction of real wages and lengthening of the working day. In fact, conditions at the end of the period under review had already begun to improve as far as real wages and the length of the working day were concerned. Although the increase in real wages during the last trade cycle under review was only small, it was, if not the third, certainly the second definite rise. In Germany it was to take about half a generation after the 1848 revolution before the decline in real wages was stopped and the working day effectively shortened. In France, the revolution of 1848 was to bring about a decisive change in the length of the working day; and the years following it also brought the first changes in the development of real wages.

France, therefore, is the only one of the three countries here reviewed in which the revolution of 1848 coincides with a crisis

in the methods of capitalist exploitation. In Britain the crisis had passed, the progressive reduction in real wages and the continuous lengthening of the working day as methods of exploitation had been partially abandoned. Thus, the objective conditions for a revolutionary rising were not as favourable as in France; for the British ruling class had discovered new means of governing and exploitation. For this reason, chiefly, the revolutionary wave which swept Europe in 1848 did not assume such proportions in Britain as in other countries. In Germany and Austria, the ruling class had not yet reached an impasse like that confronting their counterparts in France, nor had the working class yet reached such proportions and maturity as in France, to say nothing of Britain; therefore, the workers could be subjugated, objectively, more easily than in France. In France the working class was in the most favourable position for defeating the bourgeoisie. On the one hand, the capitalists had reached an impasse, and, on the other, the working class was fairly large, the petty bourgeoisie was being expropriated to a considerable degree by the process of concentration and mechanization in industry, and the peasants were heavily taxed and left with a painfully small income. Add to this the fact that the upper bourgeoisie was split into two factions: on the one side, the finance oligarchy with certain allies from the railways, the landed capitalists and some big industrialists, and on the other, the major sections of the factory owners, with the textile barons in the forefront.

Truly, the revolutionaries of that time, with Marx and Engels at the head, had every right to affirm the possibility of a change in society, first in France, and then in Germany. This confidence, in the case of France, was further supported by the fact that the French workers during the preceding years had shown great fighting spirit. True, political organization was still on a low level and trade union organization was only in its beginning. The majority of the factory workers were not organized at all and the workers in the small industries were still in organizations which dated from feudal times, even if their character had somewhat changed; or they belonged to mutual aid societies or clubs, although some of these did convert themselves into secret revolutionary groups. But the preceding eighteen years had witnessed

the revolution of 1830, in which the workers took a prominent part, the uprising of the Paris workers in June, 1832, the rising of the workers of Lyons in 1831 and 1834, the Blanquist insurrection of 1839, the great strikes of the carpenters in 1833 and 1845, and the miners' strike in Saint-Etienne of 1844, of which Levasseur rightly says that it was an insurrection. No wonder that whatever the outcome of the revolution of 1848, one would not be able to say what Engels had so rightly said of Germany in 1851: "The powers that were are again the powers that be."\*

#### SOURCES AND REMARKS

There are two standard works on labour conditions in France, the great four-volume study by E. Levasseur, covering the years from the conquest of Gaulle by Caesar to 1870, and the three-volume investigation by F. Simiand, into the development of wages since the revolution of 1789. Both these works have been quoted often in this text, and will be quoted again in the following chapters. Yet, they are clearly insufficient. Levasseur burdens his work with lengthy investigations into the development of national economy as a whole which are in this connection not very useful, as they are not closely linked up by him with the development of labour conditions. On the other hand he omits any real investigation into housing, health, and other conditions which are important elements in the standard of living and working, and devotes too little attention to a study of the length of the working day and almost none to accidents and other matters of importance. Simiand, who makes a most careful study of the better-known sources of wages, neglects the considerable amount of wage data scattered throughout thousands of pamphlets, industrial and local institutional reports, and thus, even in the restricted field of wage conditions, does not offer us sufficient facts for giving a really solid picture of the development of wages. The state of French wage statistics is far inferior to that of the British after the investigations of Wood and Bowley, or that of German statistics after the work done by my father and by myself. As far as wages are concerned, the present study has the advantage over Simiand in that it gives at least

\* *Germany, Revolution and Counter-Revolution*, first article.

a general wage index. This index is based on the data collected by Simiand while a few additional figures were integrated by making use of the following sources: Simiand, *Le Salaire des Ouvriers des Mines de Charbon en France* (wages paid by the Cie. d'Anzin, 1844); wages paid to building trade workers in Paris (masons) from 1817 to 1829 (quoted by Simiand, *Le Salaire*, Vol. III, p. 17, but not used by him in his general wage survey); wages of building trade workers, quoted by A. Hanauer, *Études Économiques sur l'Alsace Ancienne et Moderne*, Vol. II, p. 421; wages of metal workers, quoted by Emile Chevallier, *Les Salaires au XIXe Siècle*, p. 59; wages of metal workers, quoted by A. Duchatelier, *Essai sur les Salaires et les Prix de Consommation*, de 1202 à 1830, Table H; wages of building trade workers, quoted by Villermé, *Tableau d'Etat Physique et Moral des Ouvriers*, etc., Vol. I, p. 140-43. I am convinced that a thorough investigation of all the wage data available in French literature would result in a considerably improved wage index, although I believe that the general trend of wages shown here would not be affected by such improvements.

Considerably worse even than the level of wage investigations is the state of cost of living statistics. As a basis for the construction of such an index I have used the data given in the publication of the Ministère du Travail et de la Prévoyance Sociale, *Salaires et Coût de l'Existence à diverses Époques jusqu'en 1910*. In addition, I have used the various data collected by Simiand, *Le Salaire*, Vol. III, p. 88 ff., and the index of wholesale prices published in the *Bulletin de la Statistique Générale de la France*, 1928. I feel even less happy about this index than about the wage index, and I fear that the margin of error is considerably greater here than in the latter. But even a much improved cost of living index would, I believe, not change our view of the trend of real wages. Unfortunately, the sorry state of the cost of living index is not peculiar to France; it is probably worse in the United States; it is only slightly better in Britain. And my own index for Germany, which I think is the best available for any country up to 1850, is nevertheless very far from satisfactory.

Our information on the length of the working day is relatively ample and reliable, as regards the textile industry after 1830. But, in general, while we are able clearly to ascertain the trend,

our information is meagre as compared with that for Great Britain, for instance. Again, I believe that a detailed investigation of contemporary sources, especially of unpublished reports by mayors to the government, and similar sources, would furnish us with a much more intimate picture.

The same holds true of most other aspects of labour conditions. When we look, for instance, through such a valuable study as that by Marie-Madeleine Kahan-Rabecq on *L'Alsace Économique et Sociale sous le Règne de Louis Philippe*, especially the first volume, *La Classe Ouvrière en Alsace pendant la Monarchie de Juillet*, we see how much can be done in this respect by a careful perusal of contemporary records; on the other hand, this study also shows how the student of such matters cannot get everything out of his material if he avoids a summing up of the results of his work in figures, even if he gives an occasional summary in words.

France has a great tradition of local studies, much greater than that of Britain, and surpassed only by that of Germany—this because the latter was composed of local states. While the study of general history has made ample use of such material, that of labour conditions has neglected them to a surprising degree. I am sure that the new France, now emerging from this war and basing itself on the finest traditions of the country, will remedy the neglect of the past in this respect also.

## CHAPTER III

### THE PERIOD OF TRANSITION TO MATURITY, 1850 TO 1870

#### I. THE ECONOMIC BACKGROUND

DURING the period under review in this chapter we find a rapid growth of industrial capitalism. True, even at the end of this period agriculture is still the largest single branch of national economy; but manufacturing and mining are not much behind, and, combined with the tertiary branches of national economy—commerce, transport and other services—they represent more than half of French national economic activity.

The rapid growth of *la grande industrie*, of the factory system and the considerable degree of concentration which took place were due largely to the overcoming of certain difficulties in the methods of exploitation which had developed during the preceding phase. And in the degree to which these difficulties were overcome, the rule of the bourgeoisie was re-established more firmly.

By 1848 a stage had been reached in which it had become impossible for the bourgeoisie to continue to exploit by the methods hitherto employed. It was impossible further to lengthen the working day. It was also extremely difficult to lower real wages and to increase production through yet more rapid intake of women and children. The period of extensive exploitation, as an important means of securing profits side by side with the application of methods of intensive exploitation, had come to an end. From now on the bourgeoisie could continue to increase the rate of exploitation only by concentrating mainly on intensive methods, such as getting more out of the worker per hour (and also per day) while shortening the actual working day; or, while raising real wages, increasing the intensity of labour to such a degree that the increased wages, on the whole, did not imply

increased possibilities of properly restoring the energies expended; and so on.

But the year 1848 had not only brought to fruition a crisis in the methods of exploitation. Not only could the bourgeoisie no longer go on as before. The other important factor was that the workers intended no longer to tolerate the existing system. When the bourgeoisie exhausts the possibilities of any given method of exploitation, this may mean either that it must find new methods, or, if it does not find them—either because of a low level of economic intelligence (which did not happen in any country during that period) or because it has exhausted all means (and that is the stage before the necessary transition to socialism)—it will disintegrate; and this may lead to a state of anarchy or barbarism. Only if the working class, in such a situation, takes the initiative and accomplishes the abolition of the bourgeois system, can the people benefit from the impasse into which the bourgeoisie has run.

In England, during the thirties, when the bourgeoisie had reached the stage where it could no longer continue extensive exploitation, it succeeded in applying new methods of exploitation without succumbing to the onslaught of the dissatisfied workers; in Germany, during the sixties, it likewise succeeded in this without even being exposed to formidable working class pressure. Only in France, at the end of the forties, was working class pressure so strong that, while it was not overthrown, the bourgeoisie was weakened to such a degree that it could not rule alone. On the other hand, the working class was not yet strong enough to take over the rule of the country. Thus, there developed a "balance of power," affording an opportunity seized by a group of adventurers around Napoleon III who established himself between the workers and the big bourgeoisie with a considerable following of "Lumpenproletariat" (owing its existence chiefly to the slow development of working class organization before 1848 and to the inadequate political education by the workers of the petty bourgeoisie which was subjected by the bourgeoisie to rapid expropriation), and some of the peasantry, attracted by his name and ancestry.

Within a relatively short time the big bourgeoisie came to an arrangement with Napoleon and his followers. Thus, the rule

of the bourgeoisie became re-established,\* the new methods of exploitation were successfully applied and the masses of the people were again reduced to the social position they had previously occupied—except that they were now richer by experience, and that the new industrial situation afforded better opportunities to prepare for the final contest.

\* \* \*

Economically, this new phase in the history of capitalism was characterized by a rapid growth of the factory system, and of increased concentration, and by the fact that the textile industry was slowly losing its dominant position, while the mining, iron and steel, and machine building industries were rapidly forging ahead.

The following table shows the growth of heavy industry (coal, iron, steel):†

#### HEAVY INDUSTRIAL PRODUCTION

(1900 = 100)

<i>Trade Cycles</i>	<i>Index</i>	<i>Trade Cycles</i>	<i>Index</i>
1824-33	6	1852-58	25
1833-39	10	1859-68	37
1840-51	15		

The rate of growth in heavy industry has been maintained from one trade cycle to another; in fact it was remarkably steady at around 50 per cent. That the persistence of such a high rate of growth is a sign of a particular strengthening of heavy industry becomes obvious when, for instance, we look at the development of the cotton industry:

#### COTTON CONSUMPTION‡

(1900 = 100)

<i>Trade Cycles</i>	<i>Index</i>	<i>Trade Cycles</i>	<i>Index</i>
1833-39	26	1852-58	48
1840-51	36	1859-68	48

\* It is of interest to observe how much more solid the millionaire fortunes are in Gaboriau's great detective stories than in the hectic days of the July monarchy, reflected in Balzac's novels.

† Cf. Jürgen Kuczynski, *Weltproduktion und Welthandel in den letzten 100 Jahren*.

‡ Cf. *Annuaire Statistique, Résumé Rétrospectif*.

From the first to the second trade cycle under review the rate of growth was only little less than that of heavy industry; it is the period in which the textile industry dominated the scene and was the strongest power in opposition to the government of bankers and speculators. In the following trade cycle the rate of growth has declined to one-third; in the following cycle practically no growth at all took place. During the last three decades of the century—as the figures indicate—the consumption of textiles will just double, while that of iron, steel and coal will almost treble. The period of the transition of capitalism to full maturity is also the period in which heavy industry dethrones the textile industry from its place of paramouncy.\*

One reason for this growth of heavy industry is, of course, the development of a machine-building industry. The following figures show the development of the use of steam power in French industry, and also compare the development in France with that in Great Britain and Germany:

USE OF STEAM ENGINES (HORSE-POWER) IN FRANCE,  
THE UNITED KINGDOM AND GERMANY, 1840 to 1870†

<i>Year</i>	<i>France</i>	<i>United Kingdom</i>	<i>Germany</i>
1840	90,000	620,000	40,000
1850	370,000	1,290,000	260,000
1860	1,120,000	2,450,000	850,000
1870	1,850,000	4,040,000	2,480,000

The table clearly shows that the decade after 1850 was the decisive one in the mechanization of French industry (including transport), that only in the fifties did France reach the level of the thirties in Great Britain, while in Germany the decisive development took place in the sixties only—during which decade German mechanization also began to surpass that of France, and remained ahead of it up to 1945.

At the same time it must be pointed out that during this period of transition the amount of horse-power per steam engine, on the average, increased only very slightly in industry, and that the number of establishments with more than one steam engine increased very little indeed, as is obvious from the following table:

\* In 1788 the production of textiles made up three-fifths of the total industrial production, according to the Tolesan census enquiry. † Mulhall, l.c.

## STEAM ENGINES IN INDUSTRY, 1840 TO 1870\*

Year	Number of Establishments	Number of Steam Engines	Horse-Power Thousands
1830†	—	616	10
1840	—	2,591	34
1852‡	6,543	6,080	76
1860	13,287	14,513	178
1870	22,851	27,088	336

The growth between 1830 and 1840 was extremely rapid; but it is only between 1840 and 1850 that, outside of the textile industry, something developed which could be called mechanized industry; and the growth between 1850 and 1870 converted the more highly mechanized enterprises into a firmly based large scale mechanized industry.

Another cause of the rapid growth of heavy industry, which also considerably influenced the rise of steam power, was the development of the railways. In France, railways played a curious rôle: they gave to British capital an important entering wedge into French national economy—in the beginning not only British capital but also British construction firms and even British workers were used to some extent in the building of the French railways; they gave to the bankers and financial promoters under the July monarchy a golden opportunity of fleecing the middle classes and making quick and extensive profits; and finally they helped to give heavy industry a much stronger basis than it had enjoyed before.§

## LENGTH OF RAILWAY NETWORK, 1840 TO 1870

(Kilometres)

Year	Length	Year	Length
1840	497	1860	9,525
1845	956	1865	13,732
1850	3,083	1870	17,929
1855	5,611		

From 1850 on, the railways became an important branch of French national economy, and from 1850 to 1860 a development

\* Quoted from *Annuaire Statistique, Résumé Rétrospectif*.

† E. Levasseur, l.c. vol. ii, p. 163.

‡ I choose the year 1852, instead of 1850, because this is the first for which we have data on the number of establishments.

§ *Annuaire Statistique, Résumé Rétrospectif*.

of such magnitude, not only relatively but also absolutely, took place that it contributed considerably to the shaping of French national economy. In fact, it made the whole of France a much more closely knit economic unit, bringing closer together the North, South, East and West, the raw material sources and the producing centres, industrial and agricultural France.

During the same period French foreign trade took rapid strides; in fact, there has never been a period in which the volume of foreign trade grew so quickly, and it is doubtful whether, except immediately after the conclusion of a war, there has ever before been a phase in French economic history during the last two hundred years when foreign trade grew so quickly:\*

VOLUME OF FOREIGN TRADE, 1833 TO 1868

(1900 = 100)

<i>Trade Cycles</i>	<i>Index</i>	<i>Trade Cycles</i>	<i>Index</i>
1833-39	11	1852-58	27
1840-51	17	1859-68	44

During the four trade cycles under review the volume of foreign trade quadrupled, and the rate of growth increased from one trade cycle to another.

Summarizing the general economic development during the period of transition from the industrial revolution and adolescence of French industrial capitalism to that of maturity, we can say that, while the previous period established the relations of capitalist and industrial capitalist economy and free workers, of employers as owners of the means of production, and workers without such means, the phase of transition brought large scale mechanization to others besides the textile industry, laid the basis for the strong position which heavy industry has enjoyed during the last seventy years, brought about a high degree of concentration of industry, and, through an extensive system of railways, brought the whole of the country into a closely knit economic unit.

## 2. WAGES, PURCHASING POWER AND HOURS OF WORK

Wages, the most important single factor influencing working class conditions, showed a most interesting development during the period under review. Before the revolution of 1848 wages

\* See my *Weltproduktion und Welthandel in den letzten 100 Jahren*.

had reached an extremely low level; it was impossible to lower them further and at the same time keep up production.

For the period under review our material on wages and the cost of living is better than for the preceding decades. True, our wage index does not cover more industries, and as we have little material by regions, our coverage is in some respects smaller than for some preceding years. On the other hand, we have relatively reliable wage data for the industries covered for long sequences of years, and the sample, the number of workers to whom the wage data apply, is considerably larger than for the preceding period. That does not imply, however, that our wage index could not be considerably improved, especially for the textile and iron and steel industries, and that a careful perusal of local literature and company books in France would not result in a very much better founded wage index. But I do not believe that the trend indicated by the figures in the following table would be changed by it.

There is one serious shortcoming in this index, as in preceding ones. It covers only the industrial workers, leaving out of account the wages of agricultural workers. The little evidence we have, however, does not indicate that the movement of wages of agricultural workers was for any length of time different from that of industrial workers, as far as their general direction is concerned, although their movement, at some time or another, was more abrupt than that for industrial workers.

#### WAGES BY INDUSTRIES, 1850 TO 1870

(1900 = 100)

<i>Year</i>	<i>Mining</i>	<i>Metal</i>	<i>Building</i>	<i>Textiles</i>
1850	45	51	53	46
1851	44	52	52	—
1852	43	54	52	—
1853	47	55	53	—
1854	49	56	57	—
1855	50	56	57	54
1856	44	59	57	53
1857	53	60	59	56
1858	54	57	60	58
1859	—	57	60	61
1860	53	60	60	64
1861	55	61	63	66
1862	54	64	68	66
1863	57	64	69	65

WAGES BY INDUSTRIES, 1850 TO 1870—*continued*

(1900 = 100)

<i>Year</i>	<i>Mining</i>	<i>Metal</i>	<i>Building</i>	<i>Textiles</i>
1864	55	66	69	66
1865	57	66	68	65
1866	59	—	69	69
1867	61	—	69	71
1868	63	—	70	73
1869	64	—	71	74
1870	65	75	71	75

For the first time in our examination of the history of money wages in France we find that the movement of wages of all four industries under review has been very similar. No industry shows increases over a number of years nor did one decline for long in contrast to others; nor is there any industry which shows a remarkably large increase while others show only a small one, and no such disparity exists in the case of declining wages. This, of course, does not exclude some difference in tempo—the wages in the textile industry, for instance, have increased more rapidly\* than those in mining, and wages in the metal industry more than those in building; nor does it exclude movements in quite different directions when we come to year-to-year changes. But it is obvious that the various industries have, on the whole, found their place in the wage pattern, and that, during the following years, such changes in position as we observed during the first half of the nineteenth century in the case of the textile industry will not take place—except, of course, in the case of small industries, and some branches of large industries.

Consequently, the following index of average wages for industry as a whole, brings no surprise resulting from any variegated movements of wages in individual industries:

## AVERAGE WAGES IN FRANCE, 1850 TO 1870

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1850	50	1857	57	1864	67
1851	49	1858	59	1865	67
1852	49	1859	60	1866	69
1853	51	1860	61	1867	69
1854	55	1861	65	1868	71
1855	56	1862	66	1869	72
1856	55	1863	67	1870	73

\* If we could include a sufficient number of wage data for women, I believe that this increase would have been somewhat smaller.

The increase of money wages was a fairly steady one, and well distributed over the two decades—amounting to roughly 20 per cent in each decade. But this, of course, does not mean that the conditions of the workers moved necessarily in the same direction.

Let us first study the development of the cost of living in order to measure the purchasing power which the workers received in the period under review:

#### THE COST OF LIVING, 1850 TO 1870

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1850	80	1857	105	1864	96
1851	79	1858	94	1865	94
1852	81	1859	88	1866	99
1853	92	1860	100	1867	107
1854	104	1861	106	1868	109
1855	112	1862	102	1869	101
1856	114	1863	100	1870	103

The difference between the slow movement of wages and the steep variations in the cost of living is very striking. Between 1850 and 1856, the cost of living rose by more than 40 per cent, and, a few years later, it was almost down to the former level, only to rise again within a year by almost 15 per cent. During the sixties, prices were much more stable, fluctuating between a low of 94 and a high of 109.

It is obvious from this that real wages must have moved much more than money wages:

#### REAL WAGES, 1850 TO 1870

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1850	63	1857	54	1864	70
1851	62	1858	63	1865	71
1852	60	1859	68	1866	70
1853	55	1860	61	1867	64
1854	53	1861	61	1868	65
1855	50	1862	65	1869	72
1856	48	1863	67	1870	71

During the first half of the fifties real wages declined rapidly; but at the end of the decade real wages were again almost 50 per

cent over the low, and almost 10 per cent above the level of 1850. The sixties too were a period of rapid changes in real wages though they were not as extreme as in the fifties. At the end of the sixties real wages were somewhat above the level of the end of the fifties.

The trend of real wages can best be observed if we compute real wage averages by trade cycles; in order to understand the significance of the movement in the period under review, it is useful to add averages for the preceding decades:

## REAL WAGES IN FRANCE, 1789 TO 1868

(1900 = 100)

<i>Decades and Trade Cycles</i>	<i>Index</i>	<i>Decades and Trade Cycles</i>	<i>Index</i>
1789	54	1833-39	64
1800-09	62	1840-51	59
1810-19	55	1852-58	55
1820-29	70	1859-68	66
1824-33	68		

During the period under review the decline in real wages which we observed during the preceding decades stopped. From 1840-51 to 1852-58 there was some further decline. During the next trade cycle, however, real wages rose quite definitely and reached a level roughly the same as that during the period from 1824 to 1839.

But before we proceed with a further study of the implications of this development of real wages, we should pause for a brief study of the development of the hours worked per day or week. While it is impossible to give any exact data by years or even by trade cycles, we can say with a certain degree of certainty that, up to the Revolution of 1848, the average working day in the provinces was 14 hours or possibly more; in Paris the working day was roughly an hour shorter. After 1848 the average length of the working day became roughly 13 hours in the provinces, and again about an hour less in Paris. During the sixties the reduction of the working day made only slow progress.

On the whole, we can say that during the fifties the working day was about 10 per cent lower than during the forties, up to

the revolution. During the sixties the working day may have been shorter up to 12 and 15 per cent.

As the wage data on which our index of money and real wages is based usually refer to the day or the week, they do not take into account the fact that the working day had been shortened. If wages declined slightly in purchasing power between 1840-51 and 1852-58, this held true of daily and weekly wages, but not of hourly wages. Hourly real wages increased during the fifties as compared with the forties, and increased even more during the sixties.

The change in the trend of wages is indicative of the changes in the methods of exploitation.

We have previously stated that the ruling class was no longer able to continue the technique of exploitation used since the beginning of the industrial revolution; and now we can note the first important changes which took place in these methods. During the fifties, hourly real wages were rising markedly; during the sixties this rise applied also to weekly wages and to the annual real income of the workers. At the same time, the number of hours worked per worker was being reduced—quickly and fairly substantially during the months and years following the revolution of 1848; and later more slowly, although persistently.

A genuine improvement in respect of wages and hours of work had therefore taken place, partly because of determined action by the workers, but also because the ruling class could no longer proceed as before without endangering the very existence of the working class itself had the working day been further lengthened and real wages yet more depressed. The development which took place in Britain during the thirties and early forties, and which in Germany was compressed into the sixties, can be observed in France during the fifties—after the process was finished in Britain—and during the sixties, thus ending at the same time as in Germany.

It is necessary here to note briefly the relation of the wages of men, women and children. During the period under review the figures at our disposal—and they are not plentiful—indicate that there had been little change. Perhaps the position of women had slightly bettered in relation to that of men, and perhaps that of children was slightly improved in relation to that of women.

But no marked trend can be observed, although unfortunately, on the basis of the meagre data at our disposal, I cannot go so far as to say that no marked change in the trend actually took place.

As to family earnings, it seems that they have moved parallel to the earnings of the average of the individual workers. That is, the proportion of members of a family going to work had neither increased nor decreased materially, as will be seen later on when we study employment data. The increase in the degree of family employment, to be observed up to 1848, had stopped, and thus the trend of family earnings which had formerly been rising in relation to earnings per person was checked.

### 3. EMPLOYMENT, PRODUCTIVITY AND INTENSITY OF WORK

While we know in a general way that the number and percentage of workers employed in industry continued to increase after the industrial revolution, and that the percentage of workers employed in agriculture has declined, it is extremely difficult to arrive at reliable figures.

We know that in 1825 roughly two-thirds of the population was occupied in agriculture, and less than a third in industry, commerce, transport, public service and the professions. Forty years later, in 1866, agriculture still employed more people than any other single branch. Of the total occupied population somewhat over 40 per cent were engaged in agriculture, something less than 40 per cent in industry, and the rest in commerce, public service and the professions. But if we count only the wage-earners, industry had passed agriculture very considerably.

The number of industrial workers has grown rapidly. Between the early forties—when it amounted to somewhat over a million in establishments employing more than ten workers—and the early sixties it probably rose by about 50 per cent. The percentage of women and children remained the same, about 35 per cent; but when we investigate the proportion of children only, we find a not inconsiderable decline. These figures, however, are not reliable enough to enable us to hazard even approximate figures. We can only state that, according to the evidence available, the percentage of children employed definitely declined.

If we were able to distinguish those engaged in home industry and those in factories, and had reliable employment figures on each category, we would probably find that the percentage of children in home industry had changed very little, while that in the factories has definitely gone down. As to agriculture, it is doubtful whether the percentage of children declined; although in agriculture, as in industry, there was a decrease in the number of hours worked per day by children.

For mining and the iron and steel industry we have somewhat better figures. The number of coal miners, which was less than 30,000 in the first years of the forties, was 33,000 in 1850, almost 60,000 in 1860 and 85,000 in 1868. It is obvious that the most rapid development took place in the fifties and sixties. As to the iron and steel industry, the number of workers employed rose from somewhat less than 30,000 at the end of the thirties to little less than 40,000 at the end of the forties; the next figures we have refer to the beginnings of the seventies, and show, even after the losses in the West to Germany, about 55,000 in 1873.

After a survey of the general development of French industry during the period under review it is not surprising to note that employment rose especially sharply in heavy industry. Nor is it surprising that the percentage of child labour showed a tendency to decline, if we keep in mind the abandonment by employers to a large extent of the methods of extensive exploitation—that is, lowering real wages, lengthening the working day and drawing an increasing percentage of women and children into industry.

By now, industry was concentrating on intensive exploitation—getting as much as possible out of the worker per hour by augmenting his skill and applying more and better machinery; also by increasing the intensity of work per hour through speeding-up, which became possible partly through better nutrition and more leisure for the worker.

It is not as easy in the case of France as it is for Germany, for which we have relatively good figures, to investigate this change-over from chiefly extensive to almost exclusively intensive exploitation. Perhaps the following figures on production per head in the iron and steel industry can give us some indication:

PRODUCTION PER WORKER IN IRON AND STEEL INDUSTRY  
1830 TO 1846

(1830 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1830	100	1839	141
1831	103		
1832	108	1840	161
1833	114	1841	145
1834	124	1842	154
1835	138	1843	152
1836	131	1844	151
1837	136	1845	151
1838	135	1846	166

While it is hardly profitable to study the year by year figures because so many and varied influences are at work—the number of days worked per year alone influences sharply the above index of annual output per worker—the general trend of the figures is highly interesting. We note a sharp increase in productivity during the thirties, and stagnation during the seven years of the forties for which we have data at our disposal. It would not be too bold a conclusion to draw from this, therefore, that, while the lengthening of the working day during the thirties resulted in increasing production per head, a further increase in the forties—or perhaps the impossibility of any further extension—led to stagnation, even if productive technique continued to make progress. While it would be wrong to over-emphasize the importance of these figures, I believe that they furnish us with a good illustration of what is meant, in the realm of productivity, by the statement that the capitalists had reached an impasse, and were therefore compelled to change their methods of exploitation. Unfortunately, there is a gap in the statistics up to 1873 which makes it impossible for us to continue this study of productivity in the iron and steel industry. Luckily, we have some data for the coal industry which, in spite of some peculiarities in its development, may serve to show the changes in productivity for the period from 1834 to 1870:

## DAILY PRODUCTION PER UNDERGROUND-WORKER IN COAL-MINING, 1834 TO 1870

(Kilogrammes)

Year	Klg.	Year	Klg.	Year	Klg.
1834	654	1847	670	1860	698
1835	629	1848	604	1861	718
1836	647	1849	660	1862	715
1837	640			1863	721
1838	575	1850	687	1864	713
1839	542	1851	643	1865	731
		1852	662	1866	749
1840	520	1853	704	1867	748
1841	549	1854	670	1868	773
1842	593	1855	680	1869	777
1843	611	1856	695		
1844	618	1857	674	1870	767
1845	647	1858	664		
1846	655	1859	—		

At first view, it would seem that coal production per worker increased slowly, if with considerable fluctuation, during the period as a whole. However, when we compress the years into trade cycles, we get the following picture:

## PRODUCTION PER WORKER IN COAL-MINING BY TRADE CYCLES

(1900 = 100)

1834-39*	61	1852-58	67
1840-51	62	1860-68*	72

Thus, there was practically no increase in productivity between the thirties and forties. While the iron and steel industry showed stability during the forties, but progress as compared with the thirties, the coal industry did not even show progress between the thirties and forties. And this in spite of the fact that there was probably a further slight increase in the number of hours worked per day. Real progress is shown during the fifties and sixties, in spite of the fact that the working day was shortened as compared with before 1848. Unfortunately we have no accurate data on the change of the working day which would enable us to measure productivity per day and hour. But if productivity definitely rises in a period in which the working day has a tendency to grow shorter—while it had remained stable when the working

\* First year of trade cycle missing.

day tended to increase—it is obvious that certain changes in the methods of capitalist production and exploitation must have taken place. The worker is occupied for a shorter time during the day, but more is gained from him per hour; and the result of the greater intensity of labour, the more widespread use of machinery, and improvements in that machinery, is that production increases not only per hour but per day also.

During the last three trade cycles under review, the real wages of miners developed roughly as follows:

#### REAL WAGES OF MINERS, 1840 TO 1868

(1900 = 100)

<i>Trade Cycles</i>	<i>Index</i>
1840-51*	52
1852-58	49
1859-68	57

The development in mining was similar to that in industry as a whole. During the first trade cycle after the revolution real wages seem to have still declined slightly, though we can be less sure about it in mining, as our data are so incomplete; and the cost of living index, while possibly applicable to France as a whole, may give a wrong picture as regards the particular mining areas. This means that, in mining also, during the first trade cycle following the revolution, the improvement of certain aspects of working conditions took place chiefly in reference to the working day and to hourly real wages. During the second trade cycle after the revolution, however, we note a marked increase of weekly real wages as for industry as a whole. It was the shortening of the working day and the increase in real wages which made it possible for the employers to raise productivity, not only by better machinery but also through increasing the intensity of work per hour.

As the above figures refer to production per worker for France as a whole, a country in which production conditions vary very much by regions, we present in the following table some figures on the daily productivity of all miners by regions. Unfortunately we are not able to cover the development during a pre-1848 trade cycle:

\* 1843, 1844, 1847 to 1851 only.

PRODUCTIVITY IN COAL-MINING PER DAY BY REGIONS,  
1850 TO 1870

(1900 = 100)

<i>Year</i>	<i>Loire</i>	<i>Nord</i>	<i>Pas-de-Calais</i>	<i>France</i>
1850	123	53	17	75
1851	132	51	16	69
1852	135	53	27	70
1853	127	59	36	73
1854	116	58	32	68
1855	119	51	27	68
1856	114	51	37	68
1857	111	52	43	65
1858	123	52	47	66
1859	—	—	—	—
1860	129	52	38	68
1861	113	54	55	71
1862	117	58	50	71
1863	115	61	53	72
1864	112	56	52	70
1865	109	67	53	73
1866	113	69	57	74
1867	112	66	52	74
1868	109	67	58	77
1869	109	68	59	79
1870	104	68	59	78

It is of interest to observe how differently productivity developed in the three chief coal-mining regions of France: a rapid increase in the Pas-de-Calais district, a not inconsiderable increase in the Nord, and a decline in the Loire district. As our figures have 1900 as a base year, we see that productivity in the Loire district was about the same in 1870 and in 1900. The Loire district figures have, naturally, a depressing effect upon the general productivity figure in France. The following table shows the progress from the first to the second post-1848 trade cycle:

PRODUCTIVITY IN COAL-MINING BY DISTRICTS

(1900 = 100)

<i>District</i>	<i>1852-1858</i>	<i>1860-1868</i>
Loire .. ..	121	114
Nord .. ..	54	61
Pas-de-Calais ..	36	52
France as a whole ..	67	72

In the Nord productivity increased somewhat over 10 per cent; in the Pas-de-Calais it increased by almost 50 per cent; but in the Loire district it declined by about 6 per cent.

While there is no doubt that the above figures for the coal and iron and steel industry indicate a certain tendency towards stagnation of productivity at the end of the first period of industrial capitalism, and towards a renewed rise of productivity after a change in the methods of exploitation, it must not be assumed that this is more than a tendency, and that there were not many industries in which productivity did not continue to rise until 1850, nor that there were industries in which such changes in methods of exploitation did not take place much later, or hardly at all, as in the case of home industry. But the important thing here is not to establish a hard and fast rule for every industry which is impossible; what is important is to indicate certain changes in trends, and to explain their significance within the framework of capitalist methods of production in general and exploitation specifically.

#### 4. UNEMPLOYMENT, ACCIDENTS, HEALTH, HOUSING

Our information as to the development of unemployment is almost as meagre for the period now under review as for preceding ones. It is not possible to state whether unemployment, on the whole, showed a tendency to increase, remain stable, or decline. I would be inclined to say that whatever changes took place, cannot have been very significant. This refers, of course, to the degree, the percentage, of unemployment among all workers.

The picture looks different when we observe the population as a whole. And it is this picture which has been neglected by many students of labour conditions. While one may be justified in saying that in most industrial countries the percentage of unemployed increased, if at all, only insignificantly during the course of the nineteenth century, the percentage of unemployment among the population rose rapidly. For during the nineteenth century the number of workers and the proportion of the population engaged as wage earners and salaried workers increased rapidly. If, therefore, the percentage of unemployment

among the workers, over each trade cycle as a whole, was about 5 per cent in the nineteenth century; and if at the beginning of the century only about 5 per cent of the population were either workers or their wives, children or parents, and the proportion rose to about 50 per cent by the end of the century, it means that during a trade cycle at the beginning of the century only 0.25 per cent of the population was directly affected by unemployment while at the end of the century this had risen to about 2.5 per cent, or ten times more.

Thus, without an increase in the percentage of unemployment among the workers, the extent and effect of unemployment upon the population of the country had risen tenfold. And something like this is what happened in France, as in other countries also, during the period under review. While I would hesitate, therefore, to say that the percentage of unemployment among the workers was very different between 1850 and 1870 from that between 1830 and 1850, it is definite that the percentage of the population suffering from unemployment rose considerably.

For the coal industry we are able to give a more detailed approximation of the extent of unemployment, as we have data on the number of days worked per year and per worker. In the following table I give the number of days worked per worker and the number of days missed, from which we can compute the percentage of unemployment. The percentage is, on the one hand, slightly exaggerated because a proportion of the unemployment may be due to strikes or accidents and this cannot be covered by the term of unemployment, as usually understood. On the other hand, the percentage is somewhat under-rated because the normal working year was probably rather higher than the 300 days we assume, and because our figures do not take into account the workers who have been unemployed for over a year. Furthermore, such figures are never very satisfactory, as they really do not refer directly to actual unemployment among the miners, but to the number of days the mine was working and the number of miners who were working at the mine. However, with all these and other shortcomings, the following table does give us a clear impression of the sharp fluctuations in employment, of the high percentage of unemployment which prevailed in some years, and of the considerable insecurity of employment

among the miners at a period when production was substantially increasing and when their wages were so low that the slightest encroachment upon them meant cruel hardship.

## UNEMPLOYMENT IN COAL-MINING, 1843 TO 1870

<i>Year</i>	<i>Days worked per Year</i>	<i>Days not worked per Year</i>	<i>Per cent Unemployment</i>
1843	264	36	12
1844	275	25	8
1847	287	13	4
1848	264	36	12
1849	247	53	18
1850	249	51	17
1851	269	31	10
1852	272	28	9
1853	274	26	9
1854	296	4	1
1855	280	20	7
1856	275	25	8
1857	282	18	6
1858	273	27	9
1859	—	—	—
1860	285	15	5
1861	279	21	7
1862	290	10	3
1863	283	17	6
1864	288	12	4
1865	283	17	6
1866	286	14	5
1867	286	14	5
1868	281	19	6
1869	281	19	6
1870	288	12	4

Unemployment fluctuated extraordinarily, from 1 per cent in 1854 to 18 per cent in 1849; it was four times higher than 10 per cent, and five times lower than 5 per cent. The average for the two full trade cycles under review is 7 per cent in 1852-58, and 5 per cent in the years 1860-68. It seems to me doubtful whether one can say that the second trade cycle showed a decline in unemployment in industry as a whole, while there is, of course, no doubt that the business cycle ending in 1851 showed in some years high records of unemployment. The end of the forties, in France as in many other industrial countries, was a period of exceptional suffering because of the severe crisis.

As in the case of other countries, our information on the development of accidents in France is very unsatisfactory; and it is confined to the coal industry.

### FATAL ACCIDENT RATE IN COAL-MINING, 1853 TO 1870

*(Accidents per 1,000 Miners Working Full Time\*)*

<i>Year</i>	<i>Accident Rate</i>	<i>Year</i>	<i>Accident Rate</i>
1853	4.3	1862	2.3
1854	4.4	1863	2.8
1855	4.1	1864	2.6
1856	3.8	1865	3.4
1857	3.3	1866	2.8
1858	3.3	1867	3.7
1859	—	1868	2.7
		1869	3.5
1860	2.9		
1861	4.7	1870	3.0

The fatal accident rate is very high; it is considerably higher, for instance, than in Germany during the same time. On the other hand, there seems to have been a slight improvement in conditions during the sixties. The average rate of fatal accidents for the years 1853–58 is 3.9 per thousand, and for the years 1860–68 it is only 3.1. It seems that, in coal-mining in the sixties, the benefits of the decline in the number of hours worked and the increase in real wages were not entirely cancelled out as regards fatal mining accidents through higher intensity of work. But the important question of how accidents reacted upon the change in the methods of exploitation which took place from the forties to the fifties can, unfortunately, not be answered by a study of accidents in coal-mining only.

\* \* \*

The development of housing conditions in France during the fifties and sixties was, as in most other countries, highly unfavourable. Although the material is rich in facts and indications, it is not possible to measure statistically the changes which took place between the thirties and forties, on the one hand, and the fifties and sixties, on the other. But I believe we can say that while in Britain and the United States housing conditions reached their

\* Taking into account changes in the number of days worked per year.

lowest level in the thirties and forties and the early fifties, in France conditions continued to deteriorate until the late sixties. This was due to the fact that the population of the large cities grew at that time with particular rapidity. During the two decades from 1850 to 1870 the population of Paris and Lyons increased by about 80 per cent, that of Le Havre trebled, that of Marseilles, Lille and Bordeaux increased by about 50 per cent. As building activity lagged far behind this increase in population, congestion in the big industrial cities of France became terrific. As early as 1850 legislation was introduced to improve housing conditions, but it remained ineffective.

Levasseur\* described housing conditions during this period as follows—and one must not forget that Levasseur was anything but a radical:

“We follow the worker into his dwelling where he seeks rest after the day’s fatigue. In the big towns his working place is often a palace as compared with the room in which he lives. It is in the old houses of the outer districts, in the tortuous streets, that we find the piles of the workers’ dwellings. There we find unbelievable details which seem to be taken from fiction; sometimes humid cellars where the daylight penetrates only by an air-hole, and where the uneven floor covered with rubbish gives off the fumes of pestilence; attics where all the winds blow through the cracks in the roof; shaky stairs where the loose boards leave large holes and where, far from the eyes of their parents, children play who are scarcely weaned. ‘The home of the unhappy inhabitants of these holes,’ said Blanqui, ‘consists of a broken down litter without sheets or covers, and their crockery consists of a pot of wood or chipped stone which is used for everything. The youngest children sleep on a sack of ashes; the rest of the family throws itself pell-mell, father and children, brothers and sisters, on this litter which is as indescribable as the moral habits which breed there.’

“Once we have got there, we have arrived at the very lowest layer of misery. We hasten to add that we only find there a small minority of the workers. But by how many degrees must they rise, and how many categories of workers must they leave beneath them, in order to arrive at the most modest comfort?”

\* L.c. vol. ii, p. 702 f.

Nothing need be added to this description of the housing conditions of the industrial workers.

\* \* \*

Unfortunately, our knowledge of health conditions in France at that time is very limited. From the statistics we know that the general death rate practically remained stable, and that deaths from epidemic diseases, as in all other countries, declined. But what we do not learn from such statistics is the state of health of those who did not die.

From the accounts of the housing conditions we can deduce that the general state of health must have been a very poor one. This holds true for adults as well as children. In fact, it is not improbable that the state of health of those who survived such conditions deteriorated as compared with former periods, and that there existed in France, as in Britain, a deterioration of the general physique and health of the people.\*

"In the big towns, his working place is often a palace as compared with the room in which he lives," says Levasseur of the dwellings of the workers. Let us enter now with him these palaces where they work:†

"If one goes into the factories, one sees far too often workrooms with black and dirty walls. Here, a thick dust in the air of cotton and hemp chokes the throat and provokes coughing." " 'Mere visitors cannot breathe in these sad places' (Jules Simon, *L'Ouvrière*), and yet the working women pass their whole day here. Elsewhere, blackish water covers the floor or heavy heat causes the thermometer to rise up to 34 and 40 degrees (*Celsius*, *J. K.*). To how many dangers are these workers exposed during their work? The spinner who works his loom, ceaselessly bent over the bar which he pushes back with his knees, is apt to suffer from tumours and from deformations of the loins; the weaver in whose chest every beat of the shuttle resounds, may fall a victim to tuberculosis. The necessity of standing for entire days often causes intolerable fatigue and in the case of women and children may lead to infirmities. The women who wind the cocoons ceaselessly dip their hands into water which is almost

\* See introduction to the 2nd edition of vol. i of this *Short History of Labour Conditions*.

† E. Levasseur, l.c. p. 700 f.

boiling; the carders of floss-silk produce a dust which causes diseases of the eyes. . . .

"There are but few trades which do not expose the worker to some specific malady and there are few factories where the smell, the noise, the temperature are not in some way disagreeable. Often one has to walk about close to large leather belts which revolve, or the wheels of the machinery, sometimes by open trap doors or a whirling fly-wheel. It seems as though one might at any minute be caught by thongs, crushed in the cog-wheels or knocked over by a shuttle which has slipped out of its chute. And there are enough accidents to justify these fears. . . .

"The manufacturers are beginning to take safety measures; some of them surround the machines by a fender; others stop by means of a cloth the movement of the shuttle; others when getting up new machinery conceal the transmission belts under the floor. However, these precautions are still rare. That is why philanthropists demand an administrative ruling, and they are not wrong. It would have been possible to achieve much already if the tribunals had applied with severity the principle of responsibility with regard to the owner."

Conditions in France at that time were not different from those in other countries. The workers were exposed to all the industrial diseases and to all the factors which might increase their susceptibility to non-industrial disease also.

## 5. SOCIAL LEGISLATION

Few countries can boast of so much legislation against those evils which we have described as can France. In the early years of industrial capitalism a considerable number of laws and decrees were enacted against insanitary conditions in industry. Their list is really impressive, and the main dates of their enactment are:

September 21, 1791  
 October 15, 1810  
 January 4, 1815  
 January 14, 1815  
 July 27, 1818  
 June 25, 1823  
 February 9, 1825  
 May 1, 1825  
 November 5, 1826  
 November 26, 1826  
 September 20, 1828.

The fact that after 1828 no new laws or decrees were enacted, does not mean that a certain standard of health had been attained. In fact it is hardly worth detailing the industries to which the laws and decrees pertain, or their contents, as no provisions for supervision were made, and practically no prosecution took place for their infraction. They were for all practical purposes without the slightest value.

The same can be said of every law or decree dealing with social legislation, with measures to protect the workers against the worst evils of the industrial system, enacted between 1790 and 1870.

In 1813 a decree was issued forbidding child labour underground or in open-face mining. No attention was paid to it as long as it seemed profitable to employ children.

In 1814 a law was enacted—chiefly to assist the reactionaries—to re-establish the Church, and to preserve Sunday as a rest day. It was obeyed only in so far as suited the employers.

In 1841 a child protection law was enacted which forbade child labour, in factories using power or in other establishments employing over twenty workers, for all children below the age of eight, and which limited the working day for children aged eight to twelve, to eight hours per day, and for children aged twelve to sixteen to twelve hours per day; night work for children below thirteen years was also forbidden. It was applied whenever it seemed practicable to the employers. As no provision was made for supervision by a paid inspectorate, the law remained ineffective.

The law of March 2, 1848, on the length of the working day was applied, for the short period of its validity, to a considerable extent because the workers were able through their own action to enforce its realization. When, by the law of September 9, 1848, it was restricted to the field covered by the child-labour protection law of 1841, the power of the workers was already to a considerable extent diminished and thus its application became less frequent. Moreover, new decrees, dated May 17, 1851, and January 31, 1866, further limited its application.

That does not mean that the working day did not become shorter during the period under review. But the law was not enforced by the administration; there was still no paid inspec-

torate in 1870 and prosecutions for too long hours were extremely rare and even more seldom successful. The working day was shortened, not on the basis of state law, but either because of the working of economic law (a change in the method of exploitation forced upon the capitalist for reasons explained above) or because of working class pressure in certain cases.

As far as social legislation is concerned, France lagged behind both Great Britain and Prussia, and, later on, behind Germany as a whole. Even in Germany, social legislation was on a higher level in 1870 than in France.

## 6. SUMMARY OF LABOUR CONDITIONS

Labour conditions during the period under review underwent a particularly complex change. Labour conditions became worse during the fifties, when weekly real wages declined; the working day was shortened, but the intensity of work increased, and congestion in the cities caused rapid deterioration in housing conditions. No outstanding French writer has ever maintained that they improved during this period. While they were better than in the late forties—the crisis and famine years—they were worse than during the thirties and early forties. The only factor showing an improvement was the working day, and this was insufficient to counter-balance the retrogressive factors.

The situation is more difficult to judge when we come to the sixties. They show probably only a slight further shortening of the working day. But they do show a definite improvement in real wages. On the other hand, the intensity of work continued to increase, housing and health conditions not only went on deteriorating, but this deterioration proceeded probably at a quicker pace than during the preceding decade. I would be inclined to say that labour conditions deteriorated also during the sixties. If they remained stable, however, or even showed a slight improvement (which seems very improbable to me) this was due to the rapid expansion of French exploitation outside metropolitan France. "The French capital market was rapidly advancing towards the position, which it came to occupy during the 'sixties, of co-equality with London in a great part of the foreign investment business,"\* and as it had risen to this level from a much lower

\* C. K. Hobson, *The Export of Capital*, p. 129.

position than that of Britain, when we compare the situation in the forties, it is just possible that the rapid accumulation of extra-profits through foreign investments made it possible for the ruling class to keep labour conditions at home stable or—which is improbable—even to improve them slightly for the sake of uninterrupted production and industrial peace at home, in order to have a free hand for further foreign ventures.

If we were able to compute statistics of labour conditions for all workers employed by French capital, at home and in other countries, we would find indubitable evidence for a general deterioration of labour conditions under French capitalism. This is absolutely clear when we mention the chief countries in which French capital at that time was employed: Austria, Spain, Algeria, Turkey, Egypt. As the standard of labour in these countries was not inconsiderably below that in France, it is obvious that the inclusion of these foreign workers into the army of those exploited by French capital would, with the increase in their number, have an increasingly depressive effect upon the average standard of living of the workers employed by French capital.

#### SOURCES AND REMARKS

On the whole the wage statistics for the period under review were computed from the same sources as for the previous period. Fortunately, the series for the individual industries were on the whole more complete, and needed much fewer interpolations from various sources in order to arrive at a long sequence of data. Our chief sources were the tables as computed by Simiand, in his *Le Salaire*. The very poor series of data which he gives for the metal industry were supplemented by the data for Le Creusot which L. Reybaud published in his study *Le Fer et la Houille*, p. 62. In order to compute the average for industry as a whole no additional data for regions or other industries were used than those given in the table of wages by industries.

The cost of living index is the one which I constructed for my *Labour Conditions in Western Europe, 1820-1935*, and is based on the data given in *Salaires et Coût de l'Existence à Diverses Époques Jusqu'en 1910*, published by the Ministère du Travail et de la Prévoyance Sociale, Paris, 1911. I would say that it is more reliable

than that for the preceding period, but still far from satisfactory, and should be replaced by a better one as soon as somebody—for the first time in more than a generation in France!—will take the trouble to make a fundamental study of retail prices in the nineteenth century.

Productivity in the iron and steel industry was computed on the basis of the figures given regularly in the *Annuaire Statistique, Résumé Rétrospectif*; those for the coal industry are taken from or based on *Statistique de l'Industrie Minérale*, 1935, Ministère des Travaux Publics. Simiand's study *Le Salaire des Ouvriers des Mines de Charbon en France* and the *Annuaire Statistique* are our source for the estimates of unemployment in mining; the figures for 1843 and 1844 are taken from the Twelfth Special Report of the Commissioner of Labor, Washington D.C., 1905; this report and likewise the *Annuaire Statistique* are also our source for coal-mining accidents.

I would like to remark here that, while our material on productivity is somewhat better for France than for Britain or the United States, I am convinced that, while a careful survey of the literature published by industrial undertakings, or at their suggestion, might give us some more valuable material on productivity changes from one year to another (and only such data are useful), a real wealth of new material which would give us a much wider base of study could and should be opened up by a study of unpublished company books. I believe that such a study would considerably further our knowledge of the development of productivity, and enable us to make a careful investigation into the intricacies and special problems of the period of transition from the forties to the fifties. It would, at the same time, also make possible perhaps a study of the relation between accidents and productivity (and intensity of work) in those years.

## CHAPTER IV

### MATURE CAPITALISM, 1870 TO 1900

#### I. THE ECONOMIC BACKGROUND

IN spite of the fact that France lost the war with Prussia and Germany in 1870-71 and that her political and economic position in Europe was considerably weakened, the years between 1870 and 1900 witnessed a rapid and strong development of French capitalism. In no period of its existence was the French capitalist system as strong as during these three decades.

The production of coal, iron and steel—the foundation of heavy industry—continued to grow at a rapid pace:

#### GROWTH OF COAL, IRON AND STEEL PRODUCTION\* BY TRADE CYCLES

Period	Percentage Increase
1859-68 to 1868-78	33
1868-78 to 1879-86	31
1879-86 to 1887-95	15
1887-95 to 1895-1903	28

Even more rapid than these figures indicate was the development of secondary heavy industry, such as the machine industry and the vast field of other manufactures of iron, steel and other metals. Although we have no exact statistical information on production, the following data† on the use of machinery in industry give an indication of the growing strength of industry, and especially of large-scale industry:

#### USE OF STEAM MACHINE POWER IN INDUSTRY, 1840 TO 1900

Year	Number of Establishments	Number of Machines	Amount of Horse-power (ooo's)
1840	—	2,591	34
1852‡	6,543	6,080	76
1860	13,287	14,513	178
1870	22,851	27,088	336
1880	34,063	41,772	544
1890	46,671	58,751	863
1900	57,306	74,636	1,791

\* Cf. Jürgen Kuczynski, *Weltproduktion und Welthandel in den letzten 100 Jahren*.

† *Annuaire Statistique, Résumé Rétrospectif*.

‡ 1852 instead of 1850; as this is the first year for which we have figures on the number of establishments.

When we look at the first series of figures we find that after 1870 the growth in the number of establishments with steam engines was rather sharply slowing down. Between 1890 and 1900 the growth amounted to less than one-quarter, as compared with more than one-third in the preceding decade, about one-half in the decade before that, and roughly a doubling in each of the two decades before this. But if we compare the second row of figures with the first one we find that, while the number of establishments with steam engines grew less quickly, from decade to decade, the number of steam engines per establishment rose not inconsiderably. In 1850 the number of establishments using steam engines was still smaller than the number of engines—obviously some were sharing in the use of one machine. In 1860 the number of machines slightly surpassed that of establishments. In 1900 the number of machines was roughly 30 per cent higher than that of establishments. Even more interesting is a comparison of all three sets of figures. Between 1852 and 1900 the number of establishments using steam engines rose not quite nine times, the number of engines in use in industry rose slightly more than twelve times, and the horse-power of the engines used rose more than twenty times. That means that not only did the individual establishments use more steam engines, but the machines became more powerful. It is of interest to observe that the growing strength of the individual steam engines is mainly a product of the latter decades. In fact, up to the end of the seventies there was practically no augmenting of the power of the individual machines. This was a development of the eighties and nineties of the last century.

While heavy industry and the use of machinery developed rapidly, the production of consumption goods, while increasing, rather lagged behind. Cotton consumption per head of the population increased by little more than 50 per cent during the thirty years under review, while iron and steel consumption about doubled. The weight of heavy industry continued to increase at the expense of the consumption goods industry. Schneider-Creuzot had usurped the foremost place previously occupied by the textile barons of Rouen and Mulhouse. Yet, the textile industry still maintained a more powerful position than that of Germany or the United States, more comparable, though less strong,

to that of Great Britain. This is partly due to its share in the foreign trade of France. French foreign trade during the period under review developed relatively unfavourably. In the following table I give some comparative figures of the rate of growth of foreign trade for a number of countries of industrial importance:

RATE OF GROWTH OF PHYSICAL VOLUME OF FOREIGN TRADE\*  
BY TRADE CYCLES

(Per cent)

Years†	France	Great Britain	United States	Belgium
1859-68 to 1868-78	27	41	60	80
1868-78 to 1879-86	43	34	58	41
1879-86 to 1887-95	12	22	47	42
1887-95 to 1895-1903	13	18	43	30

Even in Britain, which during these decades lost its monopoly position of being the workshop of the world, foreign trade developed more favourably than in France.

This relatively slow growth of foreign trade naturally corresponded with a slow development of the French mercantile marine‡:

FRENCH MERCHANT MARINE, 1827 TO 1900

(1,000 Net Tons)

Years	Tonnage by Categories		Total Tonnage
	Sail	Steam	
1827-36	—	—	679
1837-46	625	10	634
1847-56	734	27	760
1857-66	928	84	1,013
1867-71	921	144	1,066
1880	642	278	919
1890	444	500	944
1900	510	528	1,038

During the second half of the century, about half of French merchant shipping was converted from sail to steam. The total tonnage of the mercantile marine, however, did not change materially between the early sixties and the end of the century. During the last thirty years under review, the British merchant

\* Cf. my *Weltproduktion und Welthandel in den letzten 100 Jahren*.

† For countries other than France the beginning and end years of each trade cycle vary slightly but not materially.

‡ *Annuaire Statistique, Résumé Rétrospectif*.

fleet increased by more than 50 per cent and the German doubled —while the French one remained stable.

In sharp contrast to this stagnation of the French mercantile fleet is the rapid development of the railway system.\* While the former corresponds in a certain degree to the development of French foreign trade, the latter develops on the lines of French industry.

## RAILWAY NET (KLM.), 1831 TO 1901

<i>Year</i>	<i>France</i>	<i>Great Britain†</i>	<i>Germany</i>	<i>United States</i>
1831	38	91	—	66
1841	455	1,349	580	4,536
1851	3,010	10,656	6,053	14,519
1861	9,439	16,790	11,724	49,292
1871	17,733	25,007	19,719	85,178
1881	25,925	28,864	33,838	150,113
1891	36,672	33,172	42,869	276,890
1901	42,826	35,197	51,678	325,782

The tempo of railway development in France was a considerable one, especially if we keep in mind the territorial losses France sustained in 1871, and the further fact that the population of France grew only very slowly. By 1900, the railway mileage per head of the population was greater in France than in Great Britain, including Ireland, and also greater than in Germany.

If we try to summarize the development of French national economy in the period under review, we can say that, while the development of home industry, agriculture, commerce and transport was very rapid and kept France in the forefront of the great economic powers, foreign trade and overseas shipping lagged behind. This concentration on home business also finds its reflection in a certain hesitation in French foreign investment policy. Through the rapid growth of foreign investments during the fifties and sixties, the French market had become a serious rival to the British market, and French foreign investments had reached more than two-thirds of those of Great Britain. During the next thirty years, up to the end of the century, French foreign investments increased by about three times, while British investments increased more than four times, and the total amount of French investments was reduced to about one-half of the British

\* *Annuaire Statistique, Divers Pays.*

† Including Ireland.

level. However, French foreign investments were still about double those of Germany.

At the same time, however, France again became a great colonial power, a development which we shall study later in more detail, but which it is necessary to keep in mind when we investigate in the following pages the development of labour conditions in metropolitan France.

## 2. WAGES AND PURCHASING POWER

While home industrial production made rapid strides, how did the wages of the workers develop, and their purchasing power? We know that during the preceding period the change in the methods of exploitation, required by economic conditions described above, led to an increase of real wages, first per hour and then per day and week. Did this trend continue, or do we find a new reversal?

Our information on the development of wages and purchasing power is vastly improved for the period here under review. We have wage data for a considerably greater number of industries. Our cost of living data are better. For a number of years we have information on the variations in unemployment, and thus are able to compute net wages—wages which take into account losses through unemployment. Furthermore, we have better and more reliable information on the differences in the development of wages of men and women. This is especially important in the case of France, as we are not able for lack of sufficient data to compute wages of the labour aristocracy and the masses of the workers, or for skilled and unskilled workers, so that the wage relation for men and women is the only one from which to gain some insight into the relation of the wages and the standard of living of the economically weaker and better off groups of workers.

The following table gives wages by industries. There is no adequate information available of wages by regions, so that we cannot study variations in the position of the workers of various parts of the country, as we can in the case of the United States.

## WAGES BY INDUSTRIES, 1870 TO 1900

(1900 = 100)

Year	Mining	Metal	Building	Textiles	Printing	Sugar	Tobacco	Wood-working
1870	65	75	71	75	84	—	—	75
1871	66	76	71	72	84	—	—	75
1872	72	78	71	80	84	—	—	75
1873	74	79	72	80	84	—	—	75
1874	76	80	72	82	84	—	—	75
1875	77	81	73	85	88	—	—	79
1876	74	82	74	86	88	—	—	79
1877	71	80	83	83	88	—	—	79
1878	71	80	83	86	96	—	—	82
1879	72	82	83	88	96	—	—	82
1880	76	83	94	90	96	—	—	87
1881	76	83	96	96	96	—	—	87
1882	80	84	98	96	96	102	—	89
1883	82	84	99	98	96	101	—	91
1884	82	84	98	98	96	104	—	91
1885	80	84	98	98	96	100	—	91
1886	80	84	98	97	96	96	—	91
1887	80	85	98	97	96	95	—	91
1888	80	85	98	—	96	95	—	91
1889	83	86	98	—	96	95	—	93
1890	89	86	98	—	96	93	—	93
1891	89	86	98	—	96	93	—	93
1892	91	87	98	98	96	95	91	93
1893	89	87	98	—	96	93	90	93
1894	89	87	98	—	96	94	92	93
1895	88	88	98	—	96	94	94	93
1896	88	89	98	100	96	95	96	93
1897	89	91	99	—	96	96	96	96
1898	91	94	99	—	100	96	97	100
1899	94	100	100	—	100	97	98	100
1900	100	100	100	100	100	100	100	100

When we compare the figures for 1870 and for 1900 we find that, with the exception of the printing industry which shows an exceptionally small rise and the mining industry which shows a somewhat considerable one, wages for all other industries have moved not very differently. When we compare, however, the development year by year, we notice that while the rise over the period as a whole was not very different as between the individual industries, the tempo of the movement was very varied. Between

1870 and 1879 wages in the building industry, textiles and printing rose considerably more than in metals, mining and wood-working. In the following years the rise in building and textiles was even more pronounced. About the middle of the eighties, when half the period under review had elapsed, wages in building, textiles, printing and the sugar industry were roughly on the 1900 level; no material changes took place in the wages of these industries during the last eighteen years of the century. At the same time—that is, between 1882 and 1900—miners' wages rose by about one-quarter, those of metal workers by about one-fifth and those of woodworkers by more than 10 per cent; the wages of tobacco workers—which we know only since 1892—seem to belong to the latter group of industries, as they rose between 1892 and 1900 by 10 per cent; in the mining and metal industries wages in 1897 were still about 10 per cent below the 1900 level.

When we combine the above into a single index of average wages we get the following figures:

#### AVERAGE WAGES, 1870 TO 1900

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1870	73	1880	87	1890	92
1871	73	1881	89	1891	92
1872	76	1882	91	1892	93
1873	77	1883	92	1893	93
1874	78	1884	92	1894	93
1875	80	1885	91	1895	93
1876	80	1886	91	1896	94
1877	80	1887	91	1897	95
1878	82	1888	91	1898	97
1879	83	1889	92	1899	100

Money wages moved steadily upwards, but although there is no phase with a downward movement, the upward trend took place at a very variable speed. Wages rose rapidly between 1870 and 1875, remained almost stable until the end of the seventies, and then rose rapidly again for a few years; between 1882 and 1897 wages remained practically stable, to rise again sharply during the last few years of the century.

During the same period the cost of living developed as follows:

## COST OF LIVING, 1870 TO 1900

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1870	103	1880	116	1890	105
1871	123	1881	116	1891	107
1872	112	1882	113	1892	101
1873	117	1883	114	1893	99
1874	120	1884	111	1894	102
1875	103	1885	107	1895	101
1876	107	1886	107	1896	100
1877	110	1887	106	1897	100
1878	113	1888	100	1898	101
1879	111	1889	102	1899	99

The movement of the cost of living was much more rapid and erratic, not only as compared with that of the general wage index—which had a much steadier movement—but also as compared with the indices for the various industries which, if they did indeed make some leaps, at least almost always leapt in the same direction, upwards. But the cost of living suddenly rose and equally suddenly fell, and these jumps amounted to up to 20 per cent from one year to another. If we survey the development over the period as a whole, we find that the movements became less and less marked; that the eighties show less rapid changes than the seventies, and that the nineties, between 1892 and 1900, show practically a stable index.

When we relate the index of the cost of living and that of wages in general, we arrive at the following index of real wages:

## REAL WAGES, 1870 TO 1900

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1870	71	1880	75	1890	87
1871	60	1881	76	1891	86
1872	68	1882	81	1892	92
1873	66	1883	81	1893	94
1874	65	1884	83	1894	91
1875	77	1885	85	1895	92
1876	75	1886	85	1896	94
1877	73	1887	86	1897	95
1878	73	1888	91	1898	96
1879	75	1889	90	1899	100

As was to be expected, real wages during the seventies

fluctuated considerably, declining by 15 per cent between 1870 and 1871, increasing again by more than 10 per cent in the following year, declining slowly in the following years, only to jump by almost 20 per cent between 1874 and 1875. Between 1875 and 1881 they remained relatively stable, were more lively, on a higher level, between 1882 and 1887, then reached a new and higher level in 1888 upon which they fluctuated between 1888 and 1895 and then moved steadily up until 1900.

It is obvious from this, that, on the whole, real wages continued the new development which we have already noted in the preceding period. The period in which real wages showed a constantly declining tendency has passed, and has been transformed into one in which the trend of real wages is definitely upwards. The new methods of exploitation which necessitate a rise in real wages were applied throughout the second half of the nineteenth century, and throughout this period we also notice a rising trend in real wages.

The following table facilitates a general survey of the development of real wages by giving figures for trade cycles from the early period of industrial capitalism:

AVERAGE REAL WAGES IN FRANCE, 1789 TO 1900

(1900 = 100)

<i>Years</i>	<i>Index</i>	<i>Years</i>	<i>Index</i>
1789	54	1852-58	55
1800-09	62	1859-68	66
1810-19	55	1868-78	70
1820-29	70	1879-86	80
1824-33	68	1887-95	90
1833-39	65	1895-1903	98
1840-51	59		

During the seventies real wages had again reached the level of the twenties, and in the following years real wages continued to increase. The revised trend in real wages—the increase which we observe in hourly wages after the revolution of 1848, and in weekly wages in the sixties—continued into the seventies, eighties and the nineties. The change which we observed in the methods of exploitation after the revolution of 1848 continued also to hold good, as far as real wages were concerned, for the period under review.

Again we must emphasize that real wages per hour increased more than real wages per week, as during the whole period under review the number of hours worked per day and per week had a tendency to decline and the above real wage data refer mainly to daily, weekly and annual wages.

For the last few years under review we can now investigate real wages, taking into account wage losses through unemployment. The following table gives an index of real wages, 1900 equalling 100, taking into account wage losses through unemployment and, for purposes of comparison, the above index of gross real wages:

## GROSS AND NET REAL WAGES, 1895 TO 1900

(1900 = 100)

<i>Year</i>	<i>Gross Wages</i>	<i>Net Wages</i>
1895	92	92
1896	94	94
1897	95	95
1898	96	96
1899	100	100
1900	100	100

During the years under review, none of them years of economic crisis, it makes almost no difference at all whether or not we take into account unemployment; the losses through unemployment, though considerable, varied so little that the index of gross and net real wages remains unaffected by them. But if we could also take into account losses through short-time we would find that they would in some years turn the scale, resulting in a difference in the index of gross and net real wages of 1 per cent. Conditions in this respect are different from those in Germany or Britain or the United States where unemployment fluctuated considerably more and had a much greater effect on the computation of an index of net real wages.

The average index of real wages for the trade cycle 1895 to 1903, however, is slightly affected by wage losses through unemployment, as unemployment rose not inconsiderably for the years 1901, 1902 and 1903. Instead of 98 for gross real wages—1900 equalling 100—the index of net real wages for this trade cycle is 97.

There is one further improvement which we can make in our

computations. All the data which we have employed so far refer to average wages for industrial workers, that is, workers in mining, building, manufacturing industries and in a number of crafts. While it is not possible to compute an annual wage index for agriculture, we are able to make rough estimates of the development of trade cycle averages of agricultural wages. The following table gives for the years following 1852—that is, for the second half of the nineteenth century—an index of real wages for industry alone and for industry and agriculture combined:

AVERAGE REAL WAGES IN INDUSTRY AND AGRICULTURE  
(1900 = 100)

<i>Trade Cycles</i>	<i>Industry Only</i>	<i>Industry and Agriculture</i>
1852-58	55	61
1859-68	66	75
1868-78	70	76
1879-86	80	82
1887-95	90	89
1895-1903*	97	97

The inclusion of the wages of agricultural workers, while not changing the general trend, makes a considerable change in their movement. While the wages of industrial workers increased by about 80 per cent from the fifties to the end of the century, those of industrial and agricultural workers combined rose by only about 60 per cent. The wages of agricultural workers rose definitely less than those of the rest of the workers. This is a development which we can also observe in other countries; in Great Britain the wages of agricultural workers rose to a lesser degree than those of industrial workers, while, in the case of Germany, the inclusion of agricultural workers during the second half of the nineteenth century makes practically no difference. During the last twenty years of the period under review in France, the movement of wages was fairly similar in direction as well as tempo for industrial workers and the whole of the working class, including the agricultural workers. The chief discrepancy developed during the sixties when the wages for agricultural workers, against the general trend, rose more sharply than those for industry as a whole, and then, during the following years, reacted by remaining stable or sometimes even declining.

\* Net real wages.

When we study the wages of men and women, we find no fundamental change as compared with the forties of the last century. At that time, the average wages of women amounted to about 50 per cent of those of men. A general survey of hourly wages for France, excluding Paris, indicates that women's wages were still about 50 per cent of those of men. This, of course, does not mean that the wages of women in those industries in which a very large proportion of women are employed were only about half those of men. On the contrary, it indicates a higher percentage, as the wages in industries where few women are employed—which, of course, are included in the general survey—are usually higher than those in industries with many women workers; in the metal industries wages are higher than in the textile industries, and a survey which includes both, and which shows that women's wages are about 50 per cent of those of men, indicates, at the same time, that, in the textile industries, women's wages are more than 50 per cent of men's. This is important because many mistakes are usually made in drawing conclusions from such general tables. I should like to illustrate this by a further example:

Wages of 100 men in metals	7.00 frs. a day
Wages of 100 men in textiles	5.00 frs. a day
Wages of 100 women in textiles	3.00 frs. a day

Average wages of men are 6.00 francs per day; average wages of women are 3.00 francs per day; women's wages are 50 per cent of men's wages. But in the textile industry, women's wages are 60 per cent of men's wages. Thus, the position of women within a single industry may not be as bad as the statistics for industry as a whole may indicate.

This is confirmed when we study the scanty data we have on the comparative wages of men and women in individual industries. Thus, women's wages in the tobacco industry in the nineties were about 63 per cent of men's wages, while in the sugar industry, during the last twenty years of the century, the wages of women were just about half those of men. The scanty data we possess for the textile and clothing industries, although difficult to compare, indicate that here the wages of women were considerably higher than half of the men's. We can observe how

in the textile industry, during the period under review, the wages of women developed more favourably than those of men :

#### WAGES OF WOMEN IN RELATION TO THOSE OF MEN IN THE TEXTILE INDUSTRY

(1900 = 100)

<i>Years and Five- Year Periods</i>	<i>Index</i>	<i>Years</i>	<i>Index</i>
1870-74	84	1892	99
1875-79	85	1896	99
1880-84	81	1900	100
1885-87	80		

The wages of women rose considerably more than those of men. This is a development which we can observe also in other countries. In the United States, for instance, it was probably even more pronounced than in France. During this period, women's wages had a tendency to rise in relation to those of men; the general position of women in industry improved somewhat; their wages began to form a higher percentage of those of men than during the period of transition, when they probably remained roughly stable in relation to those of men.

Our information on the relative development of the wages of children is almost nil, and even if we do have some average wage data for children, as in the case of the sugar industry, they give no indication of the actual development; for in the case of children the age distribution plays such a very great rôle, and during the period under review the average age of the children employed in factories rose rapidly.

### 3. HOURS OF WORK AND PRODUCTIVITY

While real wages increased, the hours worked per day and per week continued to decline. Although we have no accurate general data, we shall not go far astray in estimating that the average number of hours worked in industry amounted to between eleven and twelve in the seventies, to between ten and a half and eleven and a half in the eighties, and to between ten and eleven in the nineties.\*

\* This estimate is not unsimilar to that of Colin Clark, *The Conditions of Economic Progress*, p. 109.

For the last few years of the century we have more definite statements by the *Conseils de Prud'hommes* which give the following information:

## DAILY HOURS OF WORK, 1896 AND 1901

<i>Categories</i>	<i>1896</i>	<i>1901</i>
Paris		
Men	9.5	9.8
Women	10.0	10.5
Rest of France		
Men	10.4	10.3
Women	10.2	10.3

While these figures are more definite than those I gave, they are not necessarily better. It is improbable that the working day in Paris rose by as much as 5 per cent in the case of women between 1896 and 1901 and remained stable in the provinces. It is improbable that, on the average, women worked 5 to 7 per cent more than men in Paris while they worked about the same as men in the provinces. But it is probably correct to conclude from these figures that at the end of the century the working day, on the average, and if we exclude the home industries—where it had changed little since the beginning of the century and was still sometimes as much as fourteen and sixteen hours—was somewhat over ten hours, and in Paris perhaps slightly below ten.

More accurate information, but for a small number of workers and industries only, is contained in the study of R. R. Kuczynski,\* which indicates for building trade workers in Paris and Lyons during the period under review generally a ten to ten-and-a-half hour day, except for masons who in the establishments investigated worked in Paris an eleven-hour day and a seven-day week. Boilermakers in Paris in the last decade of the century in the establishments investigated worked eleven hours per day; otherwise the working day in the metal and machine building industry was about the same as for the building trade workers in general. Printing trade workers seem to have had the ten-hour day in Paris as well as in Lyons. The surprising result of the investigations of R. R. Kuczynski is that the number of hours worked per day and per week changed only very slightly, if at all, during the years from 1870 to 1900. This may be due to the fact that the

\* *Arbeitslohn und Arbeitszeit in Europa und Amerika, 1870-1909.*

industries covered by Kuczynski are largely those which had gained a shorter working day especially early in the preceding decades; partly it may be due to the fact that the establishments whose wage books he was able to study were those of the more progressive employers who had early introduced a relatively short working day. On the whole, I would not be inclined to attach too much importance to this side of his investigations, except to note that there were a number of establishments in the seventies which had already introduced the ten-hour and ten-and-a-half-hour day, and that these establishments tended to keep to this working day throughout the thirty years here under review.

But it is not improbable, on the whole, that the working day in France during the thirty years from 1870 to 1900 was shortened less than in other countries. This was due probably to the fact that, on the one hand, it was more sharply reduced after 1848 in France than in Germany or the United States, and that general improvements in certain respects during the eighties and nineties were slower in France than in these two countries.

\* \* \*

How did productivity develop in a period of rising real wages and declining hours of work, in a period in which also, as we have seen,\* not only the number of steam engines but also the horse-power of the individual machine was increasing?

Again, as for the preceding period, our information is not very good, but we have sufficient data as far as the coal, iron and steel, and certain other industries, are concerned.

For the coal industry we are fortunate enough to have data on the productivity of underground-workers per day:

PRODUCTION PER DAY IN COAL-MINING, 1870 TO 1900  
(Kilogrammes)

<i>Year</i>	<i>Klg.</i>	<i>Year</i>	<i>Klg.</i>	<i>Year</i>	<i>Klg.</i>
1870	767	1880	858	1890	1,034
1871	769	1881	875	1891	962
1872	815	1882	895	1892	958
1873	770	1883	901	1893	993
1874	756	1884	914	1894	1,015
1875	736	1885	946	1895	1,031
1876	730	1886	968	1896	1,029
1877	726	1887	1,017	1897	1,059
1878	764	1888	1,045	1898	1,060
1879	797	1889	1,066	1899†	1,043

\* See p. 120 of this book.

† 1900, 1,009 Klg.

It is obvious from the above table that there was a substantial increase in productivity from the seventies to the eighties; but from the late eighties to the nineties there was very little change. When we compare the development of productivity in coal-mining over the whole period for which we have figures, that is, from the early thirties to the end of the century, we get the following table which gives us much insight into the development of productivity in an important French industry:

PRODUCTION PER DAY IN COAL-MINING, 1834 TO 1900

(1900 = 100)

<i>Trade Cycles</i>	<i>Index</i>	<i>Trade Cycles</i>	<i>Index</i>
1834-39	61	1868-78	76
1840-51	62	1879-86	89
1852-58	67	1887-95	100
1860-68	72	1895-1903	100

It is of greatest interest to observe how the development of productivity in the coal industry in the forties of the last century heralded a new period in the history of French capitalism, characterized among other things by new methods of exploitation; and again how in the nineties the same phenomenon of stagnation of productivity seems to herald a new period with which we shall have to deal later, the period of French finance capitalism and imperialism. As we have observed already in the case of Germany, the coal-mining industry seems to be exceptionally susceptible to those factors which force capitalism into a new stage. In the phase between the two turning points, the forties to the fifties, and the end of the old and beginning of the new centuries, production per miner increased fairly rapidly, and from trade cycle to trade cycle. During the second period of French capitalism, the period of rising real wages and declining hours of work—to characterize it from the point of view of the most significant changes in labour conditions—the productivity per miner rose by more than 50 per cent. Part of this increase was, of course, due to the use of machinery and to the better organization of production; but part of it was also due to increased intensity of work per day and per hour.

For the iron and steel industry we do not possess such a continuous series of data as for coal; data for the number of workers

employed are missing during the years from 1847 to 1872, the most interesting period when we wish to examine the influence of changes in the methods of exploitation upon productivity. In the following table I give the production per worker for the period under review in this chapter:

ANNUAL PRODUCTION PER WORKER IN THE IRON AND STEEL  
INDUSTRY, 1846 AND 1873 TO 1900

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1846	46	1881	91	1891	95
		1882	96	1892	99
1873	74	1883	95	1893	100
1874	76	1884	95	1894	101
1875	80	1885	95	1895	97
1876	87	1886	92	1896	109
1877	89	1887	94	1897	107
1878	89	1888	97	1898	108
1879	86	1889	94	1899	103
1880	92	1890	100	1900	100

The level on which productivity moves was very much higher than in 1846, and up to the middle of the eighties it was almost uninterrupted in its rise. Since then it has risen less, sometimes fluctuating considerably. When we look at the following table which shows the development of production per worker by trade cycles, we must keep in mind that during the first few years of the twentieth century which belong to the last trade cycle of the nineteenth century, productivity rose sharply, reaching in 1903 a level almost a quarter above that of 1900. We have added, for purposes of comparison, the data for the years preceding 1846. Unfortunately, some of the trade cycles are very incomplete, as for so many years the data are missing.

PRODUCTIVITY IN IRON AND STEEL INDUSTRY, 1833 TO 1903

(1900 = 100)

<i>Trade Cycles</i>	<i>Index</i>	<i>Trade Cycles</i>	<i>Index</i>
1833-39	36	1879-86	93
1840-46*	43	1887-95	98
1873-78*	83	1895-1903	107

\* Incomplete trade cycles.

Productivity per worker rose sharply from the thirties to the forties. But we know that during the forties there was almost no change in productivity, that by 1840 the record of productivity had been reached. Therefore a change in methods of exploitation was needed. From the forties to the seventies productivity rose by almost 100 per cent; during the eighties productivity continued to rise; the next trade cycle shows a slowing down in the rise of productivity. The renewed sharp rise in productivity in the following trade cycle was, as we can see from the previous table, largely due to the sharp rise in productivity during the first few years of the century, although the late nineties already indicate a renewed rise in productivity. On the whole, we can say that productivity in the iron and steel industry rose considerably during the period under review, and that in this industry—in contrast to coal-mining—we notice no tendency towards stagnation at the end of the century; especially if we remember that during the whole period the working day had a tendency to become shorter. On the other hand, we must keep in mind a fact which while it cannot change the trend can modify its tempo, namely, that these figures refer to production per worker and per year, and do not take into account the number of days worked annually per wage earner.

While it is not possible to compute similar figures for the railways, the following survey of their development gives some indication of the growth of productivity in this branch of industry:

## EMPLOYMENT AND ACTIVITIES ON RAILWAYS, 1853 TO 1903

(1900 = 100)

<i>Trade Cycles</i>	<i>Passenger Miles</i>	<i>Freight Miles</i>	<i>Personnel</i>
1853-58	12	10	11*
1859-68	23	27	35
1868-78	33	44	54
1879-86	46	62	78
1887-95	63	71	84
1895-1903	88	90	94

If we now combine the freight miles and passenger miles (which can be done only for the purpose of computing productivity, if they move not too differently, as is the case in France during the period under review), we get the following figures:

\* 1853 only.

## PRODUCTIVITY ON FRENCH RAILWAYS, 1859 TO 1903

(1900 = 100)

<i>Trade Cycles</i>	<i>Passenger-Freight-Miles</i>	<i>Productivity</i>
1859-68	25	72
1868-78	39	72
1879-86	55	71
1887-95	67	80
1895-1903	89	95

There was little change in productivity between the sixties and seventies and the major part of the eighties. Only during the second half of the eighties did productivity begin to increase sharply and it continued to do so during the nineties up to the end of the century.

It is a pity that social science has provided us up to now with such scanty material on the subject of productivity that here we can only pose a number of suggestive questions. Does productivity in transport move on the whole in a manner similar to that in industry and mining? Is it subject to the same problems and factors which influence productivity in industry? Do the various phases in productivity which we can observe in industry apply also to transport? Has, for instance, the stability of productivity in France during the two trade cycles from 1859-68 to 1868-78 a significance which we cannot observe in the coal industry for specific reasons? Nor in any other industry only because we have no figures for them during this period? Were there special circumstances in France which made it possible for its transport system to remain stagnant in productivity, not only during the two trade cycles mentioned but even longer—for a further cycle? And one more question: is it not time that social scientists investigate these questions, make comparative studies, and dig out all the material which could be gathered from all possible sources?

We have some productivity material for one more industry. This is not comparable with that for other industries because of the peculiarly seasonal character of the industry concerned, and because of certain interesting changes in the sex-age composition of the workers. Yet, it is so interesting, and so significant of certain traits of capitalist production, that I propose to make use of it. These figures refer to the sugar refining industry, and cover the last two decades of the nineteenth century.

From September, 1881 to August, 1882 the sugar industry employed 65,200 workers: 49,100 men, 8,300 women and 7,800 children. In the course of the following years the percentage of women and children employed decreased until in 1893-94 there were 43,100 men, 3,900 women and 2,900 children employed. In the following years there was a continued tendency for women and children to become fewer absolutely and relatively, but until

## PRODUCTIVITY IN THE SUGAR INDUSTRY, 1882 TO 1900

(1900 = 100)

<i>Year*</i>	<i>Employment</i>	<i>Production</i>	<i>Productivity</i>
1882	134	39	29
1883	134	42	31
1884	128	47	37
1885	116	31	27
1886	108	30	28
1887	100	50	50
1888	94	40	43
1889	96	47	49
1890	98	80	82
1891	102	71	70
1892	102	66	65
1893	101	60	59
1894	102	59	58
1895	104	81	78
1896	100	68	68
1897	102	77	75
1898	101	84	83
1899	100	85	85
1900	100	100	100

1900 this tendency was less obvious than in the preceding years. This already to a certain extent invalidates our figures, as the work of children is less productive than that of adults, and with a decline in the percentage of children employed, and probably also of women employed, we should expect a rise in average productivity, even if productivity per man remains the same. The second factor which to a certain extent robs our figures of significance as to the development of productivity is the seasonal nature of the industry; and, as we have no data on the number

\* This means: from September of the preceding year until August of the year named.

of days worked, this makes it almost impossible to compute productivity figures which indicate for us an increase in technical progress and the intensity of work. And yet these figures are interesting because they do to a certain extent indicate capitalism's methods of exploitation; and, furthermore, despite the above-mentioned sources of error and distortion, we can get a very rough idea as to whether productivity increased in this period, and if so, whether it increased rapidly or slowly.

The fluctuations which this table reveals are extraordinary. The decline in employment during the eighties and the relative stability during the following years are partly to be explained by the change in the sex-age composition of the working force—the relative decline in the number of women and children employed—and partly by the desire of the employers to keep at their disposal a certain number of workers trained and ready for the next year, even if the current season suffered from a bad harvest. The fluctuations in the amount of production are enormous: between 1884 and 1885 production declined by about one-third, remained stable between 1885 and 1886, and increased from 1886 to 1887 by two-thirds; in the following year it declined by 20 per cent, then increased by almost the same amount and rose in the following year by roughly 70 per cent.

It is not surprising that under such circumstances the volume of production per worker changed with bewildering rapidity from year to year. Yet, on the whole, it shows an increase from the early eighties to the late nineties amounting to almost 200 per cent. These instances of the changes in productivity in the sugar industry cannot be used to illustrate a general trend, but it is a useful reminder of the anarchic conditions of industrial production. It illustrates also rapid changes in conditions in individual industries from year to year, and shows how, in spite of such rapid annual changes, the general trend towards increasing productivity still finds clear expression.

Summarizing our investigations into the development of productivity during the period under review, we may say that productivity continued to rise generally, but that towards the end of the century there were certain exceptions which may possibly be regarded as indications that a new crisis in methods of exploitation was developing.

## 4. UNEMPLOYMENT AND ACCIDENTS

Our information on the development of unemployment is somewhat better for the period now under review, for we have for the last few years some data on general unemployment:

## UNEMPLOYMENT IN FRANCE, BRITAIN, GERMANY, 1895 to 1900

(In Percentages)

<i>Year</i>	<i>France</i>	<i>Great Britain</i>	<i>Germany</i>
1895	7.0	5.8	2.8
1896	6.7	3.3	0.6
1897	6.9	3.3	1.2
1898	7.3	2.8	0.4
1899	6.6	2.0	1.2
1900	6.8	2.5	2.0

Though these data are not strictly comparable, it is highly probable that unemployment, on the whole, was higher in France than in Britain or Germany. It is undoubtedly a fact that unemployment was less flexible in France during the period under review than in Britain or Germany. On the whole, it seems that security of employment for the French worker was smaller than for the British or German worker.

While this is practically all the information we have on unemployment conditions in general, we are able, as for the preceding period, to make a more detailed study of unemployment in coal-mining.

We shall use for this purpose the same methods, of course also subject to the same shortcomings, as for our previous computations:

## UNEMPLOYMENT IN COAL-MINING, 1870 to 1900

<i>Year</i>	<i>Days Worked per Year</i>	<i>Days not Worked per Year</i>	<i>Per cent Unemployment</i>
1870	288	12	4
1871	286	14	5
1872	292	8	3
1873	295	5	2
1874	295	5	2
1875	295	5	2
1876	—	—	—
1877	—	—	—
1878	—	—	—
1879	—	—	—

UNEMPLOYMENT IN COAL-MINING, 1870 TO 1900—*continued*

<i>Year</i>	<i>Days Worked per Year</i>	<i>Days not Worked per Year</i>	<i>Per cent Unemployment</i>
1880	—	—	—
1881	—	—	—
1882	296	4	1
1883	293	7	2
1884	280	20	7
1885	281	9	3
1886	283	17	6
1887	287	13	4
1888	292	8	3
1889	290	10	3
1890	290	10	3
1891	288	12	4
1892	288	12	4
1893	277	23	8
1894	285	15	5
1895	283	17	6
1896	284	16	5
1897	288	12	4
1898	290	10	3
1899	287	13	4
1900	286	14	5

Thus, unemployment fluctuated considerably, but probably not more than in other countries, though probably more than in other industries in France. If we compute averages by trade cycles and add the figures for the preceding two cycles, we get the following results:

## UNEMPLOYMENT BY TRADE CYCLES, 1852 TO 1903

<i>Trade Cycles</i>	<i>Per cent</i>	<i>Trade Cycles</i>	<i>Per cent</i>
1852-58	7	* 1882-86*	4
1860-68*	5	1887-95	4
1868-75*	4	1895-1903	5

If we bear in mind that the trade cycle 1868-75 excludes the crisis years, and that the following cycle excludes the first years of increasing trade activity—that is, that both figures under-rate the amount of unemployment—we come to the conclusion that unemployment in coal-mining during the whole period from the sixties to the end of the century remained pretty stable, with only very slight changes in one or the other direction for each

\* Incomplete trade cycle.

trade cycle average. There was no tendency for unemployment to increase, nor was there one definitely in the direction of a decline.

\* \* \*

As in the case of unemployment our material on the development of accidents is somewhat fuller for the period under review. As for the preceding period, we have at our disposal data for the coal-mining industry; in addition; we have some information on accidents on the railways for the whole period under review, and for part of the time in shipping. For industry as a whole we have data only after 1900.

In the following table we have the rate of fatal accidents in coal-mining:

#### FATAL ACCIDENT RATE IN COAL-MINING, 1870 TO 1900

(Per 1,000 Miners Working Full Time)

<i>Year</i>	<i>Accident Rate</i>	<i>Year</i>	<i>Accident Rate</i>
1870	3.0	1886	1.4
1871	3.4	1887	1.8
1872	2.5	1888	1.9
1873	2.2	1889	3.2
1874	2.0		
1875	2.1	1890	2.7
1876*	3.7	1891	1.8
1877*	2.2	1892	1.0
1878*	1.4	1893	1.0
1879*	1.6	1894	0.9
		1895	1.3
1880*	1.8	1896	1.4
1881*	1.7	1897	1.1
1882*	1.5	1898	1.1
1883	1.6	1899	1.5
1884	1.7		
1885	1.8	1900	1.5

During the seventies fatal accidents showed a tendency to decline, and to do so fairly rapidly; in the eighties they remained stable—the rapid rise in 1889 and in 1890 is not unusual if accidents move, on the whole, on a relatively low level, and then some big disasters occur; they then throw the whole development out of its normal course. It is interesting to note here

\* Not taking into account the number of days worked per year; this causes a slight underestimate of the fatal accident rate.

that in the United States, during this period, big disasters are not so noticeable in the general accident figure, as accidents were normally very numerous in the States. After a rapid decline from 1890 to 1892, accidents were again fairly stable on a level which was definitely lower than that prevailing in the eighties. If we study the development of accidents during the whole of the second half of the nineteenth century in coal-mining we get the following picture by trade cycles:

#### FATAL ACCIDENT RATE IN COAL-MINING

(Per 1,000 Full-Time Miners)

<i>Trade Cycles</i>	<i>Accident Rate</i>	<i>Trade Cycles</i>	<i>Accident Rate</i>
1853-58*	3.9	1879-86	1.6
1860-68*	3.1	1887-95	1.7
1868-78	2.6	1895-1903	1.3

From the fifties to the middle of the eighties, there was a rapid and continuous decline in the fatal accident rate; since then it has fluctuated somewhat, but in the trade cycle around the turn of the century it was lower than ever before.

If we were able to take into account the development in the length of the shift per worker, the above figures would look somewhat different in so much as the accident rate per hour of exposure would not have fallen as much as the rate here computed; nevertheless it would still have fallen considerably. It is possible also that one would then be able to say that with the eighties the fall in the rate of fatal accidents had practically come to an end.

It is not possible to make as satisfactory an examination of the development of accidents on the railways, but the following figures are so expressive that there cannot be any doubt about the trend of railway accidents.

#### FATAL ACCIDENT RATE ON RAILWAYS, 1871 TO 1900

<i>Years</i>	<i>Number Employed</i> <i>1,000</i>	<i>Travellers</i> <i>1,000,000</i>	<i>Fatal Accidents</i> <i>Number</i>
1871-75	175	115	315
1876-80	187	149	391
1881-85	235	202	447
1886-90	227	229	393
1891-95	251	309	543
1896-1900	264	396	555

\* Incomplete trade cycle.

During the period under review the number of employees increased by about 70 per cent; the number of travellers by over 240 per cent; and the number of fatal accidents was in 1896-1900 only about 75 per cent higher than in 1871-85. If we look at the development of one half-decade to another, we find that the accident rate fluctuated considerably. But the general trend was obviously and sometimes sharply downwards.

The number of people killed by accidents at sea other than shipwreck has been known for too few years to indicate a definite trend, while that of people losing their lives in shipwrecks showed a clear tendency to rise since the eighties—no reliable figures being known for former years.

When we survey the development of all accident figures we can come to the conclusion that fatal accidents have probably declined from the seventies to the end of the century. On the other hand, there are some indications that this decline was more rapid during the earlier years of the period under review, and that in the later years a certain stability may even have prevailed in the fatal accident rate.

Figures for non-fatal injuries, which are available in a number of cases, should not be used as they are unreliable for all industries and branches of national economy, not only in France but in all other countries. This is because the reporting of such injuries is not uniform; and during years of high unemployment and crisis the workers often force themselves to stay at work even when injured, in order to keep their jobs, while, in times of high employment, they would be much more inclined to go home, under similar circumstances.

## 5. SOCIAL AND POLITICAL CONDITIONS

The image which we have formed up to now of the development of labour conditions in France is not unfavourable. We have found that real wages increased, that the working day was shortened, that while, of course, the intensity of work increased, the rate of fatal accidents—as far as our information goes—actually showed a decrease; and that while the number of people affected by unemployment rose, because of the relative increase of the number of workers to the sum of the population, the percentage

of unemployed among the workers, as far as our evidence goes, did not show any increase. These factors indicate that labour conditions improved during the period under review.

As to general social conditions, health, measures to alleviate insecurity of employment, and labour legislation, the situation is somewhat different. While we have no material for France like that resulting from the investigations of Drummond or Orr in Britain, all the evidence points to a slow deterioration of health. This was due partly to the worsening of housing conditions, partly to stagnation in the development of medical services—as contrasted with the progress of medical sciences—and to the low level of labour legislation and slackness of its enforcement.

As an indication of the development of the medical services two facts may be cited. Firstly, no social legislation was introduced to set up a health service for the workers. Secondly, the number of people served by one physician in France was as follows:

1866	2,300
1876	2,600
1886	2,600
1896	2,600
1901	2,300

It would probably be no exaggeration to say that health services in France deteriorated during the period under review, if we keep in mind the fact that the increasing urbanization and industrialization of a country always call for more attention to health problems.

Social legislation during the period under review brought forth really only two laws of importance. The first one was the Child Protection Law of 1874 (May 15), which raised the entrance age for children in factories from eight to twelve years—ten years during a period of transition—and provided for the appointment of fifteen district inspectors to supervise this law's enforcement. The scope of the application of child labour protective legislation was enlarged so as to embrace all establishments with the exception of family establishments. The working day for children up to twelve years was to be of six hours, and, for children aged twelve to sixteen, twelve hours, as previously. For women up to twenty-one years of age the working day was to be the same as

for children aged twelve to sixteen. Night work and Sunday work was forbidden for children, and for women up to twenty-one if the latter worked in factories. In March, 1885, the number of inspectors was increased; but even then the law did not become really effective. Then came a second important piece of social legislation—the law of November 2, 1892—which applied the law of 1874 to all women regardless of age. At the same time child labour legislation was further improved; the minimum factory working age was raised from twelve to thirteen years; the working day for children up to the age of sixteen was fixed at ten hours; and for adolescents aged sixteen to eighteen, as well as for all women, the working day was fixed at eleven hours. For men the working day remained the same as in 1848: twelve hours per day.

On the whole, social legislation in France was still far behind that of Germany or Great Britain; in fact, it probably was much more behind in 1900 than in 1870.

But if social legislation was backward, the political position of the workers during a large part of the period under review was so weak as simply to bear no comparison with that of the workers in many other countries.\* The reactionary forces which harshly persecuted the labour movement after the defeat of the Commune, made a revival of labour action on a large scale extremely difficult for many years to come.

The French workers had never had the right of free association; trade unions were illegal; and while for some time under the Second Empire there was a certain tolerance, this attitude was modified in the seventies. Trade unions did not become legalized until March 2, 1884. Therefore, we see that, during the first fourteen years of the period under review, trade unions were still illegal and workers were being persecuted for joining them. This, of course, seriously influenced the workers' fighting chances, and many a strike was lost because they were forbidden to have their unions. Often the strongest traditions of struggle could not overcome this handicap. For instance, the miners of the Anzin Company, who had taken part in strikes in 1846, 1848, 1855,

\* It is significant that the first poem by a recognized French writer having a strike for its theme was written in 1892. It is "La Grève des Forgerons," by François Coppée.

1864, 1872, 1878, 1879, 1880 and 1884, lost most of their strikes during the period under review. But once the workers had the legal right to organize, the situation improved. While the Anzin strike of 1884, involving almost 10,000 workers, was lost, the five months strike of the furnace workers of Decazeville in 1886 was victorious. Unfortunately French strike statistics are of value only since 1890—though a careful study of contemporary records (as has been shown by American research experience) would probably enable us to compute useful strike statistics for many years back.

After the official sanctioning of the formation of trade unions, their number and membership grew rapidly. The following are the official statistics published under the significant title: Number of Professional Associations Legally Formed and Their Membership:

TRADE UNIONS IN INDUSTRY AND COMMERCE, 1884 TO 1900

<i>Year*</i>	<i>Number</i>	<i>Workers</i>	<i>Year</i>	<i>Number</i>	<i>Workers</i>
1884	68	—	1893	1,926	402,125
1885	221	—	1894	2,178	403,440
1886	280	—	1895	2,163	419,781
1887	501	—	1896	2,243	422,777
1888	725	—	1897	—	—
1889	821	—	1898	2,324	437,793
			1899	2,361	419,761
1890	1,006	139,692			
1891	1,250	205,152	1900	2,685	492,647
1892	1,589	288,770			

By 1900 the number of organized workers had reached half a million; that is, 200,000 less than in Germany, which, however, had a somewhat larger number of workers, and less than one-quarter of the number of workers organized in Great Britain; the number of unions, however, was about double that of Britain—an indication of the degree of decentralization of French trade unions.

Strike statistics give the following picture:

\* 1884 to 1896, on the 1st July; 1898 to 1900 on the 1st January.

## STRIKE STATISTICS, 1890 TO 1900

<i>Year</i>	<i>Number of Strikes</i>	<i>Number of Strikers</i>	<i>Percentage Striking Unsuccessfully</i>	<i>Number of Men- Days Struck</i>
1890	313	118,941	65	1,340,000
1891	267	108,944	30	1,717,200
1892	261	48,538	30	917,600
1893	634	170,123	52	3,174,850
1894	391	54,576	31	1,062,480
1895	405	45,801	36	617,469
1896	476	49,851	43	644,168
1897	356	68,875	29	780,944
1898	368	82,065	47	1,216,306
1899	739	176,772	17	3,550,734
1900	902	222,714	26	3,760,577

If we compare conditions in Britain and in France we find that strike activity in Britain was considerably greater than in France. While there were only three years during the period under review with between three and 3·8 million strike-days, there were in Britain only three years with less than 3·8 million strike-days while there were four with over 10 million. As to the success of the strikes, in France in two years more than half of the workers struck unsuccessfully, in Britain only in one year; in France in only one year did less than a quarter of the workers strike unsuccessfully; in Britain this was the case in two years, while in six years one-third or less of the workers were unsuccessful in both countries.

On the whole one gains the impression that, as far as the elementary rights of labour are concerned, the position, for a considerable part of the period under review, was very much worse in France than in many other countries, and that the effects of this were still clearly evident in the years following the removal of restrictions on organization.

Thus, when we study the social and political position of the worker in France—especially social legislation, labour protection and the right of association—we find that conditions were worse, in part very much worse, than in other countries. And if it improved in the course of the period under review, this improvement was slow; the shadows of the past still darkened the picture even after the legislative restrictions were partially removed.

If we put these facts beside those relating to wages, hours of

work, etc., and when we try to evaluate their relative importance, it seems not improbable that, taken all together, labour conditions have during the period under review slightly improved although a more detailed investigation into health conditions—for which at present very little material is available—might disprove this conclusion.

## 6. THE FRENCH COLONIAL EMPIRE

A definite conclusion as to whether the conditions of the workers improved or deteriorated becomes much easier, however, if we ask: Did conditions among all workers exploited by French capital improve or deteriorate? For now we include, not only workers in France, but also those exploited by French capital in other countries, through foreign investments and the acquisition of colonies.

True, French foreign investments during the period under review increased less than those of Britain. But they increased much more rapidly than did the national income of France.

### NATIONAL INCOME AND FOREIGN INVESTMENTS, 1870 TO 1900

<i>Years</i>	<i>National Income*</i> <i>1,000 Million Francs</i>	<i>Year</i>	<i>Foreign Investments†</i> <i>1,000 Million Francs</i>
1860-69	20	1869	10
1870-79	25	1880	15
1880-89	25.7	1890	20
1890-99	27	1902	27-37

We see that the rate of growth is much greater with foreign investments than with the national income. Now, as foreign investments were mostly made in countries where the standard of living was considerably lower than in France, it is obvious that the speedy increase in their rate of growth led to a rapid increase, absolute and relative, in the number of people exploited by French capital and living at standards lower than those in France. This had the effect of depressing the average standard of living of all people exploited or plundered by French capital.

The situation becomes even clearer when we study the development of the colonial empire. France had lost a great colonial

\* Cf. Colin Clark, *The Conditions of Economic Progress*, p. 104.

† Cf. Lenin, *Imperialism*, p. 58.

empire, largely to Britain, during the closing phase of the feudal period. Then, for almost half a century, France remained a colonial power of small importance. But, with the acquisition of Algiers in 1830, a new period of colonial development set in. The development was rapid, but, because there had been so little to start with, by 1860 the area of French colonial possessions was still less than one-tenth that of Britain, and the colonial population even less than one-fortieth. Only during the period under review did colonial expansion reach weighty proportions. The following table illustrates this:\*

## EXTENT OF COLONIAL POSSESSIONS

<i>Years</i>	<i>Great Britain</i>		<i>France</i>	
	<i>Area Million sq. miles</i>	<i>Population Millions</i>	<i>Area Million sq. miles</i>	<i>Population Millions</i>
1815-30	?	126.4	0.02	0.5
1860	2.5	145.1	0.2	3.4
1880	7.7	267.9	0.7	7.5
1899	11.6	345.2	3.7	56.4

The extraordinary increase in the number of those subject to exploitation, existing at a very low standard of living, becomes even clearer when we compare the colonial and the metropolitan population:

## POPULATION IN FRANCE AND COLONIES, 1870 TO 1900

<i>Years</i>	<i>Millions</i>	
	<i>France</i>	<i>Colonies</i>
1815	29.4	—
1830	32.4	—
1815-30	—	0.5
1860	36.5	3.4
1880	37.5	7.5
1899	38.9	56.4

At the end of the century the colonial population was considerably greater than the home population. Even if we had no figures at all, nor the slightest factual information about the development of conditions in the Colonies, we would still know that the average standard of living of people exploited by French capital declined rapidly, for the number of those on a colonial standard had increased so much in relation to those on a metropolitan standard.

\* Lenin, *Imperialism*, p. 71.

But not only did the standard of living of the people exploited by French capital decline rapidly because of the relative increase of people living on a colonial standard. We also have some evidence for the fact that the standard of living, in at least some important colonies, declined under French rule. In Algeria, for instance, this was due partly to a policy of the expropriation of tribes, partly to exorbitant taxation. Between 1882 and 1900 the African people were deprived of 2 million hectares of land, and H. J. Priestley, an American authority, in a study published by the American Historical Association\* states: "During a period of twenty-four years ending in 1906 the revenues from native taxation represented a falling off of taxable values by one-sixth. The system was resulting in a steady impoverishment of the people, the end in sight being reduction of the Arabs to the condition of a propertyless proletariat ready for insurrection."

It would not be right to imagine that conditions developed everywhere in the same way; in some colonies conditions for part of the population improved in some aspects; the methods of impoverishment were not the same in all colonies; but on the whole one can say that between 1870 and 1900, by means of methods not peculiar to France, the colonial peoples were reduced to lower standards of living and property than they had experienced before.

We can sum up as follows, therefore: the conditions of the people exploited by French capital during the period under review deteriorated partly through the acquisition by French capital of large colonial possessions with populations living on a low standard, partly by the deterioration of the colonial standard of living, partly by capital investments in non-colonial countries, and finally by a partial deterioration of the standard of living of the workers in the mother country—especially in the home industries; but it is doubtful whether the average standard of living deteriorated for the workers in the mother country alone.

#### SOURCES AND REMARKS

For the period since 1870, there is no outstanding work on the history of labour in France, as there is for previous years in the

\* *France Overseas, A Study of Modern Imperialism.*

studies by Levasseur. And as most books published during this century and dealing with former periods are based on Levasseur, the fact that he has not dealt in detail with the period 1870 to 1900 also lowers the quality of minor works. The only exception to this is the special wage study by Simiand, from which we have quoted.

The wage statistics are based on three sources: wages in mining, sugar and tobacco are taken from the annual figures in the *Annuaire Statistique*; those in printing and woodworking are taken from R. R. Kuczynski, *Arbeitslohn und Arbeitszeit in Europa und Amerika, 1870-1909*; wages in the textile industry are taken from Simiand's above-mentioned book on wages; wages in the metal and building industries are based on the data given by Kuczynski and Simiand. The average wage index, as always, is weighted according to the number of workers employed in each industry. For wages in agriculture we made use of the data given by Simiand, *Le Salaire*, Vol. III, in the first table. For the wages of men and women in the textile industry, cf. the tables given by Simiand, Vol. III, wage series 3 c and 3 c'.

The cost of living data are based on the same sources and computed in the same way as in the previous chapter.

For productivity in coal-mining and in the iron and steel industry, see sources given in the previous chapter. Productivity data on railways and in the sugar industry are based on data given in the *Annuaire Statistique*.

Accident statistics for coal mines: based on sources given in previous chapter; accidents on railways, cf. *Annuaire Statistique*.

Unemployment in coal mines: same sources as in previous chapter; unemployment in general, cf. *Annuaire Statistique*.

Health, trade union, and strike statistics, cf. *Annuaire Statistique*.

While French economic, social and specifically statistical literature on labour conditions during the period under review is relatively poor as compared with that on former periods, and poor also as compared with British or American material dealing with contemporary conditions in those countries, no country has at its disposal so much general literature, chiefly novels, dealing with social and labour conditions. A study of the novels of Zola, for instance, will give a good general and fairly well detailed

picture of conditions in a number of French industries. I hope that, after having laid a statistical groundwork in this book, either I myself or others with greater knowledge will be able to expand the present study into a full description of the life of the working people of France and of the people of the French colonial empire during the period under review, making use of novels, contemporary letters and diaries, newspapers and periodicals, and so on. Only when we have learned to examine conditions from every angle, and to make use of every source, shall we be able to give a really adequate account of the history of labour conditions.

## CHAPTER V

### THE PERIOD OF DECAY AND CATASTROPHE, 1900 TO 1944

#### I. THE ECONOMIC BACKGROUND

AROUND the turn of the century, a new epoch in the history of capitalism set in, the period of monopoly capitalism. The process of concentration had increased to such a degree in quantity that its quality had changed and concentration partially turned into monopolization. The process of conquering new worlds and new markets could not go on as before because the limits of expansion had been reached; the world's territory was already divided up among certain powers, and additional markets and territories for exploitation could be gained only through a re-division. Industrial production continued to grow, but in the older capitalist countries this growth tended to slow down. World trade continued to grow, but its rate of growth tended to diminish, and barriers built against its further development became more and more formidable.

All this applies to Britain and Germany as well as to France. French capitalism entered its third period, following upon that of the industrial revolution and the period of the maturity of French capitalism. It is this period which forms the basis and background for the development of labour conditions during the last half century. Without a clear picture of the general trends of French national economy during this period it would be difficult to comprehend the development of labour conditions.

The period under review can be sub-divided into three phases: the years from 1900 to 1914 which retained many features of the previous stage and were to a certain extent a period of transition; the years from 1914 to 1938, which fully characterized and expressed the salient features of monopoly capitalism; and finally the years of catastrophe from 1939 to 1944 which, at the same time, prepare for the emergence of a new France.

Let us study the development of industrial production during the years under review :

# GROWTH OF INDUSTRIAL PRODUCTION, 1859 TO 1939

Years	Coal, Iron and Steel Production*		General Industrial Production†	
	Index	Rate of Growth Per cent	Index‡	Rate of Growth Per cent
1859-68	27	—	—	—
1868-78	36	33	—	—
1879-86	47	31	—	—
1887-95	54	15	—	—
1895-1903	69	28	65	—
1903-08	82	19	72	11
1909-14	100	22	93	29
1914-23	58	42§	68	27§
1924-34	109	88	117	72
1934-39	104	5§	109	7§

During the second half of the nineteenth century the rate of growth of heavy industry fluctuated between 28 and 33 per cent, except for one trade cycle when it fell to 15 per cent. Our figures are, of course, only approximate, but we can venture perhaps to say that the rate of growth during the second half of the nineteenth century was remarkably stable, with the exception of one trade cycle.

In the twentieth century the situation changed radically. The first two trade cycles show a further increase of production but at a lower rate than in the nineteenth century. During the third phase, that of the war and the first post-war years, production showed a decline of over 40 per cent, the first decline of production from one trade cycle to another on record. In the following years production went up again, but so little that it barely rose above the level prevailing before the first world war. Production in the next few years was again on a lower level. Then followed a period in which French heavy industry's production, under the German occupation, reached partially considerable heights because of intensive armament production, but in which—because of the collapse of production in other, non-armament, industries—production on the whole reached a very low level.

\* Cf. Jürgen Kuczynski, *Weltproduktion und Welthandel in den letzten 100 Jahren*, 1909-14 equals 100.

† Official French index—cf. *Annuaire Statistique*.

‡ 1913 equals 100.

§ Decline.

|| 1919-23 only.

It is of interest to compare the development in the use of machinery with the development of production.

USE OF MACHINE POWER IN INDUSTRY, 1900 TO 1936\*

Year	Number of Establishments	Number of Machines	Amount of Horse-Power (1,000)†
1900	57,306	74,636	1,791
1910	63,135	82,238	2,913
1919	52,306	66,100	3,352
1919	52,306	66,100	2,465
1920‡	55,073	69,833	3,044
1929	54,211	63,958	6,452
1936	47,092	50,382	7,705

This development is of the very greatest interest. The number of establishments using power showed stagnation. Increasing by almost a quarter between 1890 and 1900, their number in 1929 and before the second world war was lower than in 1900. The number of machines in use, which rose by about 30 per cent between 1890 and 1900, continued to rise by somewhat over 10 per cent up to 1910, and then, after a not inconsiderable decline, remained stable until 1929, only to fall again rapidly in the thirties. The period of monopoly, quite obviously, is one in which the number of establishments using machines, and the number of machines in use, either tends to stagnate or even to decline. How different the picture when we look at the power used! Between 1890 and 1900 the amount of power employed had risen by roughly 100 per cent; during the following ten years the rise amounted to about two-thirds. In 1929 the amount of power used was about five times that of 1900, and since then it still further increased. The enormous strengthening of the productive forces, the rapid increase in the power of each machine, and of each factory, are obvious from these data. The productive capacity of French industrial capitalism, in spite of all retarding tendencies, has risen considerably during the period under review; and so has the concentration of power. In contrast to former periods, the use of machinery did not spread to ever new factories; in contrast to the preceding period, individual factories did not employ more machines, but each machine employed

\* *Annuaire Statistique*.

† Figures prior to 1919 in 1,000 H.P. units. Second figure for 1919 and figures for later years in 1,000 kilowatts.

‡ New frontiers.

was immensely more powerful than around the turn of the century.

In this connection it is of interest to compare the development of industrial production with that of foreign trade. The physical volume and the percentage growth of foreign trade developed as follows:

### FOREIGN TRADE, 1859 to 1938

(1909-1914 = 100)

<i>Trade Cycles</i>	<i>Volume</i>	<i>Rate of Growth Per cent</i>
1859-68	33	—
1868-78	42	27
1879-86	60	43
1887-95	67	12
1895-1903	76	13
1903-08	84	11
1909-14	100	19
1914-23	89	11*
1924-34	100	12
1934-38	78	22*

The decline in the rate of growth, which we have already noticed in the latter part of the nineteenth century, was not accentuated, except during the war years and in the thirties. French foreign trade, on the whole, was increasing at a remarkably steady rate up to the last world war. The losses during 1914-18 were made up in so far as the former peace-time level was just reached in the years 1924-34; but while we cannot speak of a stronger tendency towards stagnation until the first world war, conditions since then deteriorated, and the tendencies towards stagnation and even decline became very marked.

Curiously enough, this relative stagnation was not reflected in the development of the French merchant marine, which in certain respects reminds one of the development of the use of power in industry:

### FRENCH MERCHANT MARINE, 1900 to 1937

<i>Year</i>	<i>Number of Ships</i>	<i>Tonnage (in thousands)</i>
1900	15,585	1,038
1910	17,621	1,452
1914	17,617	1,629
1920	15,538	1,518
1930	16,584	2,064
1937	15,162	1,684

\* Decline.

While the number of ships tended to stagnate or even to decline, the tonnage per ship increased considerably, and the total tonnage in 1930 was about double that of 1900—while in Great Britain the increase during the same period had amounted to only one-third, though in Germany it had doubled too, and in the United States had more than trebled.

Different again was the development of foreign investments. While French foreign investments roughly doubled between 1870 and 1890, reaching the considerable figure of 20 billion francs in the latter year, during the following twenty-odd years, until before the outbreak of the first world war, French foreign investments trebled, reaching the gigantic figure of 60 billion francs. In relation to British foreign investments, French investments were:

in 1870	about two-thirds,
in 1890	about one-half,
in 1914	over two-thirds.

When we study the composition of foreign investments by continents, we find by far the largest part of the investments were made in Europe. Lenin\* gives the following table of the approximate distribution of foreign capital around 1910:

<i>Where Invested</i>	<i>Investing Country</i>	
	<i>France</i>	<i>Britain</i>
	<i>Billion Marks Invested</i>	
Europe .. .. .	23	4
America .. .. .	4	37
Asia, Africa, Australia .. ..	8	29

French investments were centred largely in Europe, and of the European investments almost half were probably invested in Tsarist Russia.

When we compare the development of national income and foreign investments, we find that the latter almost doubled during the years before the first world war while the national income rose by less than a quarter, probably even less than a fifth.

Summarizing the general economic development, we can say that there were definite tendencies towards stagnation in some fields of economic activity, such as production, foreign trade, the

\* L.c. p. 59.

number of establishments using power, etc.; while further progress took place in other fields, such as the power of the machines used, foreign investments, the growth of the merchant marine, concentration and monopolization, merging of banking and industrial capital into finance capital, and so on.

The effects of these changes in the economic basis of French society upon the development of labour conditions, of changes indicating a tendency towards stagnation as well as those showing a tendency towards further rapid development, will be studied in the following pages. They are as far-reaching as those observed in former volumes of this history in regard to Germany, Britain and the United States of America.

## 2. WAGES AND PURCHASING POWER

When we study the development of wages in the various French industries during the period up to the first world war, we are surprised by two facts: firstly, a very rapid rise in some industries and a slow development in others; secondly, the fact that our information and the quality of our figures have somewhat deteriorated as compared with previous decades, as is obvious in the following table:

### WAGES IN INDIVIDUAL INDUSTRIES, 1900 TO 1914

(1900 = 100)

<i>Year</i>	<i>Mining</i>	<i>Metal</i>	<i>Building</i>	<i>Textiles</i>	<i>Printing</i>	<i>Sugar</i>	<i>Tobacco</i>	<i>Wood-working</i>
1900	100	100	100	100	100	100	100	100
1901	103	95	100	100	100	103	102	100
1902	98	90	100	—	100	103	104	100
1903	97	92	100	—	103	103	105	104
1904	97	—	100	—	103	103	107	—
1905	97	—	100	—	103	104	107	—
1906	102	101	—	103	103	105	112	—
1907	105	—	109	—	103	107	115	—
1908	107	—	—	—	103	109	118	—
1909	107	—	116	—	103	110	118	—
1910	108	—	—	—	103	111	121	—
1911	110	109	127	105	103	113	123	—
1912	112	—	—	—	—	116	125	—
1913	116	—	128	—	—	118	128	—
1914	117	—	—	—	—	—	130	—

Between 1900 and 1910 wage increases fluctuated between 3 and 18 per cent; shortly before the war wage increases in some industries reached little less than one-third. If we combine these wage data into an average index, we get the following result:

## AVERAGE WAGES, 1900 TO 1914

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1900	100	1908	108
1901	99	1909	109
1902	97		
1903	99	1910	111
1904	99	1911	113
1905	99	1912	114
1906	104	1913	115
1907	105	1914	117

During the first decade of the century average wages increased at a normal rate as compared with former periods, and the same is true of the few remaining years before the world war. As far as the tenor of average money wages is concerned, the new period in the course of capitalism's development does not seem to have made a fundamental difference.

We shall now check whether the normality of the development of money wages was modified in any way by abnormal movements of the cost of living:

## COST OF LIVING, 1900 TO 1914

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1900	100	1908	100
1901	94	1909	99
1902	92		
1903	100	1910	103
1904	98	1911	112
1905	94	1912	116
1906	93	1913	113
1907	98	1914	111

The cost of living does not seem to have moved very differently from former periods; anyway, we know that its movement is usually more erratic than that of money wages. Dividing the above cost of living index into the wage index we get the following index of average real wages before the first world war.

## REAL WAGES, 1900 TO 1914

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1900	100	1908	108
1901	106	1909	110
1902	106		
1903	99	1910	108
1904	101	1911	101
1905	106	1912	98
1906	112	1913	102
1907	106	1914	105

Thus, real wages varied not inconsiderably from year to year, but, before we can judge their movement, it is better to compress them into trade cycle averages and compare these with the preceding one :

## AVERAGE REAL WAGES, 1879 TO 1914

(1900 = 100)

<i>Years</i>	<i>Index</i>	<i>Years</i>	<i>Index</i>
1879-86	80	1903-08	105
1887-95	90	1909-14	104
1895-1903	98		

While it would be wrong to attribute too much weight to the fact that real wages in the first full cycle of the twentieth century increased slightly less than in the preceding cycles, it is proper and necessary to note the fact that during the second cycle there was no increase at all. And even more : this cycle is incomplete—broken by the war—and does not include a crisis. It would not be too venturesome to conclude that, had no war broken out, the average real wages during this cycle would have been below those of the preceding cycle. Anticipating information which only a study of the following years will reveal, we can say that the variation in development in the last pre-war cycle indicates a fundamental change in the situation. The rise in real wages had come to a stop. As the number of hours worked during the period under review had probably declined further, we cannot say that hourly real wages, in the period preceding the first world war, already showed a tendency to decline ; but we are justified in claiming that the general development of real wages in the years preceding the first world war reflected a fundamental

change in the methods of exploitation. For about half a century real wages had increased. Now they were stagnating and later on declining.

If we compute net real wages—that is, if we take into account wage losses through unemployment—we get, for the period under review, the following results, which confirm our data above:

## GROSS AND NET REAL WAGES, 1900 TO 1914

(1900 = 100)

<i>Year</i>	<i>Gross Real Wages</i>	<i>Net</i>	<i>Year</i>	<i>Gross Real Wages</i>	<i>Net</i>
1900	100	100	1908	108	106
1901	106	105	1909	110	110
1902	106	103			
1903	99	97	1910	108	109
1904	101	98	1911	101	102
1905	106	104	1912	98	99
1906	112	111	1913	102	103
1907	106	106	1914	105	107*

Except during the years of crisis and depression and of high trade activity, the difference between the two indices is not marked. If we combine them into trade cycle averages we find:

## GROSS AND NET REAL WAGES

<i>Trade Cycles</i>	<i>Gross</i>	<i>Net</i>
1903-08	105	104
1909-14	104	105

It is not surprising that the net real wage index shows a slight rise as it is this index which is most seriously affected by the fact that the second cycle does not include the years of crisis and depression, during which unemployment was high.

\* \* \*

The next phase in the development of labour conditions comprises the war years and the years immediately following the war. Our information on wages and the cost of living is meagre and unreliable. Frankly, the following data are no more than estimates, even when official figures are used, although for some industries the material available is much better than for others:

\* First half of the year.

## WAGES IN INDIVIDUAL INDUSTRIES, 1914 TO 1923

(1900 = 100)

<i>Year</i>	<i>Mining</i>	<i>Metal</i>	<i>Building</i>	<i>Textiles</i>	<i>Printing</i>	<i>Sugar</i>	<i>Tobacco</i>
1914	117	—	—	—	—	—	130
1915	103	—	—	—	—	123	137
1916	118	132	133	129	129	136	140
1917	148	168	191	—	—	158	145
1918	217	201	229	—	—	188	160
1919	312	275	—	—	—	242	350
1920	412	338	325	—	—	359	422
1921	432	353	—	450	394	513	463
1922	368	341	356	—	—	510	462
1923	430	347	—	—	—	541	460

By 1917, wages in the metal and building industries seem to have increased most; it is obvious that by the end of the war industries not connected with war production—sugar and tobacco, for example—lagged behind considerably.

In post-war years this tendency seems to have been almost reversed: by 1923 wages in textiles, sugar, etc., seem to have advanced more than those in the metal and building industries.

If we combine the above figures into an average for industry as a whole we get the following figures which, however, must not be regarded as more than approximations:

## ESTIMATE OF AVERAGE WAGES IN FRANCE, 1914 TO 1923

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1914	117	1920	395
1915	120	1921	427
1916	130	1922	390
1917	169	1923	406
1918	220		
1919	311		

Wages were doubled during the war, increasing slightly from 1914 to 1915, somewhat more until 1916, and by 30 per cent between 1916 and 1917, as well as between 1917 and 1918. Between 1918 and 1921 wages again almost doubled, then declined in 1922 and increased again somewhat in 1923 without reaching the 1921 level.

For the same period we are fortunately able to compute wages

for agriculture as well as for industry. The following table gives wage data for agriculture, and for industry and agriculture combined:

## WAGES IN INDUSTRY AND AGRICULTURE, 1914 TO 1923

(1900 = 100)

<i>Year</i>	<i>Agriculture</i>	<i>Agriculture and Industry</i>	<i>Year</i>	<i>Agriculture</i>	<i>Agriculture and Industry</i>
1914	117	117	1920	351	380
1915	129	123	1921	367	407
1916	152	138	1922	368	383
1917	193	177	1923	390	400
1918	216	219			
1919	222	281			

These figures, unfortunately, are also no more than rough estimates, but they are sufficiently accurate to indicate the general trend, and to show how wages in agriculture—which up to 1914 had moved about the same as those in industry—rose considerably more during the first war years. By the end of the war—after the intensification of war production was combined with higher wages in industry—the gap between the wages of industrial and agricultural workers was closed again. In the post-war years here under review, the wages of agricultural workers are not only absolutely but also relatively lower than those of industrial workers as compared with 1914; this is the experience of agricultural workers in most countries, where their wages during the war had risen considerably as compared with those of industrial workers.

The cost of living during the period under review developed as follows:

## THE COST OF LIVING, 1914 TO 1923

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1914	111	1920	428
1915	130	1921	387
1916	153	1922	371
1917	189	1923	417
1918	264		
1919	323		

If we now divide the average wages in industry and agriculture by the cost of living index we get the following index of real wages:

## ESTIMATE OF AVERAGE REAL WAGES, 1914 TO 1923

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1914*	105	1920	89
1915	95	1921	105
1916	90	1922	103
1917	94	1923	96
1918	83		
1919	87		

Real wages during the whole war period were below the pre-war level, and even though they increased again in the post-war years, they remained on a low level. The average for the years under review, 1900 equalling 100, is 95.

If we take into account wage losses through unemployment, we arrive at the following index of net real wages in industry and agriculture:

## ESTIMATE OF AVERAGE NET REAL WAGES, 1914 TO 1923

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1914	97	1920	93
1915	97	1921	102
1916	94	1922	105
1917	99	1923	101
1918	87		
1919	90		

On the whole, net real wages moved slightly more favourably than gross real wages. This is due to the fact that during the period under review wage losses through unemployment—as we shall see later on in more detail—were on the whole lower than in the preceding pre-war years.

It is perhaps interesting to compare here the development of net real wages in industry and agriculture during the period under review with the development in the preceding trade cycles:

## NET REAL WAGES BY TRADE CYCLES

(1900 = 100)

<i>Trade Cycles</i>	<i>Index</i>	<i>Trade Cycles</i>	<i>Index</i>
1895-1903	97	1909-14†	105
1903-08	104	1914-23‡	96

\* 1914, second half.

† 1914, first half—not full trade cycle.

‡ 1914, second half—not full trade cycle.

Average real wages during the decennium under review were about the same as at the turn of the century, and lower than during the two trade cycles preceding the war.

\* \* \*

The third phase comprises the years from 1924 to 1939, that is to the outbreak of the present war. For this period our information on wages is not only better than for the preceding phase, but of a quality which, while it could certainly be better, is superior to that for any other phase or period in the history of French labour conditions.

#### WAGES IN INDIVIDUAL INDUSTRIES, 1924 TO 1939

(1900 = 100)

<i>Year</i>	<i>Mining</i>	<i>Metal</i>	<i>Building</i>	<i>Textiles</i>	<i>Printing</i>	<i>Sugar</i>	<i>Tobacco</i>
1924	489	384	398	554	474	581	463
1925	509	399	422	598	517	629	483
1926	609	468	501	692	654	684	553
1927	674	480	509	698	640	708	587
1928	665	538	525	731	659	768	598
1929	736	561	589	809	711	773	668
1930	794	607	637	853	758	827	776
1931	767	607	641	848	777	860	844
1932	705	567	599	819	758	855	819
1933	698	571	586	785	736	874	826
1934	700	571	580	778	732	858	869
1935	697	552	561	768	713	850	847
1936	775	650	644	930	815	880	940
1937	1,077	780	770	1,060	1,010	1,023	983
1938	1,243	860	855	1,165	1,130	1,225	—
1939*	1,308	905	—	—	—	—	—

The inflationary trend in French economy is very obvious in the above wage data. During the period under review, wages increased between two and three times, and we need no comparative cost of living data in order to realize that this is no genuine increase. But, while wages rose so considerably in money terms, this rise did not vary very much from one industry to another; in none was it less than 100 per cent, and only in two—mining and printing—above 125 per cent.

When we compute average wages for industry as a whole we arrive at the following results:

\* First half only.

## AVERAGE WAGES IN INDUSTRY, 1924 TO 1939

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1924	458	1932	669
1925	495	1933	684
1926	595	1934	676
1927	595	1935	662
1928	623	1936	783
1929	705	1937	897
		1938	942
1930	760	1939*	985
1931	737		

On the whole, wages rose until 1930; then France, somewhat later than other countries, came also under the domination of the world crisis and wages began to decline until—with much fluctuation—they reached a low point in 1935. With the new government of the Popular Front, wages rose and continued to increase until immediately before the outbreak of the war.

If we add our data on agricultural wages, we get the following all-inclusive wage average:

## WAGES IN INDUSTRY AND AGRICULTURE, 1924 TO 1939

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1924	467	1932	690
1925	502	1933	701
1926	602	1934	685
1927	607	1935	675
1928	641	1936	765
1929	715	1937	897
		1938	942
1930	760	1939*	985
1931	742		

Between 1924\* and 1930 the inclusion of agricultural wages somewhat raised the total wage level; but in 1930 the rise in agricultural and industrial wages since the beginning of the century was practically identical. Between 1930 and 1935 agricultural wages again tended to rise somewhat faster than industrial wages; but during the last few years under review the rise of industrial and agricultural wages as compared with 1900 was again practically the same.

During the same period the cost of living varied as follows:

\* First half-year only.

## COST OF LIVING, 1924 TO 1939

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1924	462	1932	657
1925	500	1933	650
1926	631	1934	645
1927	643	1935	604
1928	649	1936	634
1929	695	1937	774
		1938	872
1930	726	1939*	916
1931	711		

Like the general wage level, the cost of living rose until 1930. Between 1930 and 1935 it fell continuously; only to rise again from year to year until the outbreak of the war.

From the above two tables we can compute the following average real wages:

## AVERAGE REAL WAGES IN INDUSTRY AND AGRICULTURE,

1924 TO 1939

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1924	101	1932	105
1925	100	1933	108
1926	95	1934	106
1927	94	1935	112
1928	99	1936	121
1929	103	1937	116
		1938	108
1930	105	1939*	108
1931	104		

These, of course, are gross real wages, and they do not take into account, as does the following table, the considerable changes in wage losses through unemployment and short-time:

## AVERAGE NET REAL WAGES, 1924 TO 1939

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1924	106	1932	88
1925	105	1933	90
1926	100	1934	87
1927	95	1935	91
1928	103	1936	100
1929	108	1937	101
		1938	94
1930	110	1939*	97
1931	99		

\* First half-year only.

On the whole, net real wages, during the period under review, moved below the level prevailing at the turn of the century. The tendency for real wages to decline—which we observe during the present century after a long period of increasing wages—seems to have become accentuated. This will be clearer from the following table which gives real wages for the whole period for which we have studied them:

# AVERAGE REAL WAGES, 1789 TO 1939

• (1900 = 100)

<i>Years and Trade Cycles</i>	<i>Index</i>	<i>Years and Trade Cycles</i>	<i>Index</i>
1789	54	1868-78	76
1800-09	62	1879-86	82
1810-19	55	1887-95	89
1820-29	70	1895-1903†	87
1824-33	68	1903-08	104
1833-39	65	1909-14‡	105
1840-51	59	1914-23§	96
1852-58	55	1924-34	99
1859-68	75*	1934-39	95

The change in the trend of real wages which has taken place during the present century is very obvious. Between 1800 and 1850 real wages, though fluctuating, showed a tendency to decline. Between 1850 and 1900 they almost doubled. Between 1900 and 1939 they again fluctuated with a tendency to decline.

No data are available to indicate the development of real wages in the closing years of this period of French capitalism. While it is true that we have wage data, and while there are also some data on the cost of living, they are absolutely insufficient to give us an insight into the actual development of real wages under the German occupation and Pétain. But this phase is one of the few for which we need no statistical confirmation in order to draw conclusions which have become so terribly obvious: real wages, the purchasing power of the workers declined with appalling steepness from the beginning of the war to the liberation of France from German Fascism.

\* Since 1859-68 including agriculture; industry only, 66.

† From 1895-1903 on net real wages.

‡ 1914, first half; no full trade cycle.

§ 1914 second half; no full trade cycle.

|| 1939, first half only; no full trade cycle.

When we survey, therefore, the whole period of the rule of French monopoly capitalism, since the beginning of the present century, we find that real wages have on balance declined sharply.

\* \* \*

Before we conclude our survey of wages it is useful to add some remarks on the relative development of the wages of men and women. This is especially necessary as once again, as for the preceding periods, we are not able to study the development of the relation of wages between other groups of workers, representing those in a weaker and those in a stronger position, such as skilled and unskilled, or workers belonging to the aristocracy of labour or to the mass of the workers.

The following table enables us to study the development of average wages of men and women in a large number of industrial occupations—the occupations not being identical; that is, we study first the development of wages of men and women in general:

#### HOURLY WAGES OF MEN AND WOMEN IN INDUSTRY, 1901 TO 1938

(1911 = 100)

<i>Year</i>	<i>Men</i>	<i>Women</i>	<i>Year</i>	<i>Men</i>	<i>Women</i>
1901	89	87	1930	883	1,053
1906	96	91	1931	883	1,053
1911	100	100	1932	868	1,022
1921	502	509	1933	846	983
1924	563	600	1934	846	991
1925	607	657	1935	826	983
1926	700	809	1936	961	1,139
1927	720	787	1937	1,217	1,339
1928	750	857	1938	1,346	1,587
1929	833	983			

During the pre-war years the wages of men and women, taking account of fluctuations, did not on the whole move differently. And after the war, in 1921, we find that the wages of men and women were by about the same percentage above the level of 1900. During the following years, however, we find that the wages of women had a tendency to rise more than those of men.

Before we discuss this movement in more detail it is necessary to study first the development of wages of men and women in

identical industries. For this purpose we have satisfactory data only for the sugar and tobacco industries; no reliable data can be computed for the textile industries which are much more important for our purposes than the two above named.

The following table gives figures for the sugar and tobacco industries:

WAGES OF MEN AND WOMEN IN THE TOBACCO AND SUGAR INDUSTRIES, 1900, 1911 AND 1914 TO 1938

(1900 = 100)

<i>Year</i>	<i>Tobacco Industry</i>		<i>Sugar Industry</i>	
	<i>Men</i>	<i>Women</i>	<i>Men</i>	<i>Women</i>
1900	100	100	100	100
1911	123	127	113	124
1914	130	132	—	—
1915	134	161	121	142
1916	138	153	134	156
1917	145	146	156	179
1918	160	155	183	231
1919	341	432	233	320
1920	414	503	354	407
1921	456	549	513	530
1922	457	523	508	546
1923	456	531	540	552
1924	459	542	582	575
1925	480	544	626	701
1926	547	657	678	793
1927	583	668	702	817
1928	590	753	764	832
1929	661	816	768	876
1930	770	885	822	915
1931	840	923	855	947
1932	814	914	850	947
1933	821	912	870	951
1934	869	868	852	982
1935	844	914	845	948
1936	936	1,009	873	1,012
1937	976	1,116	1,017	1,142
1938	—	—	1,214	1,432

Up to 1914 wages in the tobacco industry moved in the same way for men and women, while in the sugar industry the women forged ahead. During the war the women gained relatively more than the men, except in the last few years in the tobacco industry when the men made good their relative losses. In 1919 and in

1920 the women had again gained generally on the men. During the following years, they tended to lose again in comparison with the men, but in 1925 the wages of women were once more at least 10 per cent higher—as compared with 1900—than those of men. This difference widened to 20 per cent and more in the following years and then became smaller again; but up to 1933 the difference was always at least roughly 10 per cent. In 1934 the women in the tobacco industry lost heavily and came down to the relative level of the men, but this was changed in the following year, and for the rest of the period under review the wages of women were again about 10 per cent above the relative level of men's wages. On the whole, we can, therefore, say that during the period under review the wages of women, after a varied movement before the war, were definitely increased more above the 1900 level than those of men. And as in many years the real wages were below the 1900 level, we can say that real wages declined less for women than for men, and that there were a number of years in which the real wages of men showed some decline as compared with 1900 while those of women showed a slight increase.

Such a development is not surprising. It is an experience also in other countries that during periods in which the real wages of the workers tend to decline, those of the worst paid decline less than those of the better paid, as the wages of the latter can be driven further down without immediately endangering their very existence.

When we now turn back to the previous table, comparing men's and women's wages in industry as a whole (and not in identical industries), we find that on the whole the development was not very different from that in the tobacco and sugar industries. One could perhaps say that the gain in women's wages appears somewhat higher in industry as a whole (although I would not like to draw too definite a conclusion from a table which gives only the wages in sugar and tobacco); this would indicate that average wages in industries where women were employed in large numbers gained relatively on those where but few women were employed. This would not be surprising because it would mean that "disproportionate" wage rises for women have a tendency, in the industry where they occur, to lift the

wages of men to a certain extent with them, somewhat above the men's general wage increases (or less than their wage decreases). In summarizing, we may conclude that the wage position of women in relation to that of men has somewhat improved, while on the whole their real wages declined like those of men.

### 3. HOURS OF WORK AND UNEMPLOYMENT

While real wages began again to decline in the period under review, there is no evidence that the working day in France was lengthened. It is true that during the first fourteen years of this century—that is, up to the first world war—the decline in the length of the working day had practically come to a standstill. On the basis of the figures collected by the *Conseils de Prud'hommes* one can estimate that the working day at the end of the century amounted to slightly above ten hours in industry; and the same holds true for the last few years before the first world war. But, as a consequence of large scale workers' action at the end of the war, the working day experienced what may have been the sharpest reduction in the history of the struggle for the shorter working day in France. While the fluctuations in the years following the first world war were relatively small, the Popular Front movement in 1936 brought new reductions in the working day. The following figures give rough estimates of the development of the working day in industry up to 1930, and more accurate data on changes in the working week for the following years:

#### LENGTH OF WORKING DAY, 1900 TO 1929

1900 to 1909	slightly over 10 hours
1910 to 1914	slightly over 10 hours
1914 to 1918	probably 11, if not more hours in 1917 and 1918
1920 to 1929	between 8½ and 8¾ hours in any year

#### LENGTH OF WORKING WEEK, 1930 TO 1939

Year	Hours	Year	Hours	Year	Hours
1930	48·0	1934	44·7	1937	40·2
1931	46·7	1935	44·5	1938	38·7
1932	43·7	1936	45·7	1939*	40·8
1933	45·3				

\* January to July only.

The figures for 1930 to 1938, in contrast to the preceding ones, do not refer to the normal but the actual working week. For this reason we find during the period of crisis, that is, of increased short-time, a decline in the number of hours worked per week. The first genuine decline in the normal working week took place after the Popular Front government came to power; it introduced in numerous industries the forty-hour week. But later many exceptions from the hours laid down by the decrees were allowed, and during the months immediately preceding the war the normal working week was again somewhat increased.

On the whole we can summarize the development as follows: probably standstill from 1900 to 1914; lengthening of the working day from 1914 to 1918, especially in 1917 and 1918; rapid and substantial shortening of the working day after the war; standstill between 1920 and 1936; new shortening between 1936 and 1938; increase of the length of the working day from 1938 to 1940.

And then follows the period of occupation. Under German Fascist occupation the working day in the armament factories, and any other factories in whose production the Germans were interested, rose sharply, sometimes to over twelve hours, thus reverting to conditions prevailing before the revolution of 1848. The numerous French workers forced to slave for German Fascism in Germany also experienced a rapid lengthening of the working day. On the other hand, workers in industries in which the Germans showed little interest, especially consumption goods industries, often worked very short time, and had sometimes to get along with only half their wages in consequence. It is obvious, therefore, that any computation of average hours worked per week, even if such computations were reliable, would completely misrepresent the situation, giving averages of very long and very short hours.

\*            \*            \*

Our unemployment data for the period under review are not better than those for the preceding one. Up to 1913 we have percentage figures on unemployment, but for later years we are forced to compute estimates of such percentages on the basis of unreliable data regarding the absolute amount of assisted workers, of workers whose desire for work was not satisfied and of employment figures.

In our computations of net real wages I have assumed that the workers lost the following percentage of working time through unemployment and short-time :

# ESTIMATE OF UNEMPLOYMENT AND SHORT-TIME,

1900 TO 1939

<i>Year*</i>	<i>Percentage</i>	<i>Year</i>	<i>Percentage</i>	<i>Year</i>	<i>Percentage</i>
1900	7	1914	10†	1928	4
1901	8	1915	5	1929	2
1902	10	1916	2		
1903	9	1917	1	1930	2
1904	10	1918	2	1931	12
1905	9	1919	3	1932	23
1906	8			1933	24
1907	7	1920	2	1934	25
1908	9	1921	10	1935	26
1909	7	1922	5	1936	24
		1923	2	1937	20
1910	6	1924	2	1938	20
1911	6	1925	2	1939‡	17
1912	5	1926	2		
1913	5	1927	6		

The development of unemployment in France has been remarkable and has differed considerably during the period under review from that in other big capitalist countries—a fact which is supported by a great deal of additional evidence, to mention only the most important: France's positive immigration policy during the nineteen-twenties.

During the pre-war years unemployment in France seems to have been higher than in other countries—although the figures for all countries, with the possible exception of Great Britain, are not good enough for that period for us to be absolutely sure. In the course of the war, unemployment in France did not develop very differently from that in most of the other countries at war.

But, however inaccurate our figures, there cannot be the slightest doubt that, during the post-war years up to 1930 unemployment in France was much lower than in the United States, Great Britain, Germany or almost any other capitalist country. Whether, for instance, unemployment was actually 2 per

\* For 1900 to 1913 official percentage figures for unemployment only.

† First half 4 per cent, second half 15 per cent.

‡ First half only.

cent in 1924, as I estimate it to be, or whether it was twice as high or only half, it was very much lower than in any of the above-mentioned countries. British unemployment in that year was over 8 per cent, German unemployment over 13 per cent, Swedish unemployment around 10 per cent. Belgium, however, followed a development not unsimilar to that of France.

While French labour conditions during these years were worse than those prevailing before the war or at the end of the last century, social insecurity—in contrast to almost all other countries—had not increased as far as employment was concerned. On the contrary, it is perfectly possible that security of employment was greater in France during the twenties than in many other corresponding periods in the past history of that country.

This changed fundamentally in the course of the crisis of 1929–33. The crisis began to affect France later than most other countries. In 1930 France's productive activity was still relatively high, while almost all other countries were already in the grip of a most severe crisis, and unemployment in Britain had reached 16, and in Germany even 23 per cent. Only in 1931 did the crisis begin seriously to affect France. But, from then on, it held the country in its grip practically until the advent of the Popular Front government. During the years from 1934 to 1936 conditions in France were worse than in most other countries; and the fact that they had deteriorated in the two preceding years also singled out France, because while they were very poor in most other countries, they had at least begun to improve—except, of course, in Fascist Germany.

Thus we can say that while France did not share the fate of most other countries in the twenties, namely, high unemployment even during years of relatively high trade activity, she suffered relatively more than many other countries in the years following the crisis of 1931.

It is true that the Popular Front government of 1936 was able to bring about an improvement in the situation, but it was impeded in its activities by the reactionaries, the "Two Hundred Families," to such a degree that it was not in a position to amend the situation rapidly and fundamentally. Improvement in the security of employment under the Popular Front government was less than in the length of the working week.

Under the German occupation unemployment ceased to exist in a large part of France because hundreds of thousands of Frenchmen were either transported into Germany or put to work for the occupationists in France, while over a million were prisoners of war. But in other parts of the country, it probably rose not inconsiderably; though on the whole it was not high.

#### 4. PRODUCTIVITY, INTENSITY OF WORK AND ACCIDENTS

During the period under review we have observed a deterioration in many aspects of the life and work of wage earners: security of employment began to decline, real wages were lowered, there was an inflationary rise of prices. But one item continued to improve almost right up to the end, at least until 1938: the length of the working day, which was, sometimes slowly, but on the whole continuously, shortened.

What was the relation between this shortening of the working day and the development of productivity? Let us again begin our study with a survey of the development of productivity in coal-mining:

#### PRODUCTION PER DAY AND PER UNDERGROUND-WORKER IN COAL-MINING, 1900 TO 1935

<i>Year</i>	<i>Klg.</i>	<i>Year</i>	<i>Klg.</i>	<i>Year</i>	<i>Klg.</i>
1900	1,009	1912	980	1924	789
1901	956	1913	978	1925	796
1902	951	1914	957	1926	837
1903	986	1915	982	1927	833
1904	967	1916	989	1928	912
1905	997	1917	912	1929	986
1906	988	1918	836		
1907	971	1919	803	1930	984
1908	939			1931	1,043
1909	938	1920	765	1932	1,155
		1921	746	1933	1,243
1910	944	1922	758	1934	1,290
1911	959	1923	796	1935	1,333

The figures give the impression that production per day and per underground-miner remained about the same during the whole period, except for the last few years when it rose sharply. A better picture of the long-term development is given in the

following table which shows the development during the last hundred years by trade cycles:

PRODUCTIVITY IN COAL-MINING, 1834 TO 1934

(1900 = 100)

<i>Period</i>	<i>Index</i>	<i>Period</i>	<i>Index</i>
1834-39	61	1887-95	100
1840-51	62	1895-1903	100
1852-58	67	1903-08	97
1860-68	72	1909-14	95
1868-78	76	1914-23	85
1879-86	89	1924-34	98

It is obvious from this table that, as during the last years of the industrial revolution, productivity during the period of monopoly capitalism has remained stable or even shown a tendency to decline. After the rapid rise during the years of maturity, when productivity increased by over 50 per cent, the rise first stopped and then even turned into a temporary decline.

Yet it would be wrong to compare these figures of the various periods of French capitalism without qualification. For since the revolution of 1848 the working day showed a tendency to decline. That means that production per hour increased during the second half of the century much more than the above figures show, and that during the twentieth century the development of productivity was also more favourable. Yet, even if we take into account the variation in the number of hours worked which amounted to a shortening of the working day by roughly 10 to 15 per cent, the trend of productivity in the twentieth century has not changed fundamentally. Instead of a tendency to a decline, we may find a tendency towards stagnation, with an occasional slight increase—quite a different development from that in the second half of the nineteenth century when productivity rose constantly and rapidly.

Let us now see whether the development in the coal-mining industry was unique or whether we find similar trends elsewhere.

For the iron and steel industry we have comparable figures unfortunately only up to 1928, but though it would be highly desirable to have a complete set until at least 1939 for our specific purpose, the data available are sufficient. The following table shows the development of productivity between 1900 and 1928:

## ANNUAL PRODUCTIVITY PER WORKER IN THE IRON AND STEEL INDUSTRY, 1900 TO 1928

(1900 = 100)

<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>	<i>Year</i>	<i>Index</i>
1900	100	1910	140	1920	107
1901	102	1911	152	1921	126
1902	115	1912	157	1922	204
1903	128	1913	154	1923	192
1904	139	1914	—	1924	212
1905	127	1915	156	1925	293
1906	132	1916	200	1926	302
1907	132	1917	182	1927	355
1908	128	1918	176	1928	449
1909	135	1919	81		

We need no detailed investigation in order to see that productivity in the iron and steel industry increased considerably. Of course, as the above figures relate to the annual production per worker, they do not take into account changes in the number of days worked, in the rate of employment, and in the length of the working day. But the trend revealed in them is so strong and obvious that taking these factors into account would appear merely as a desirable refinement whose absence, however, cannot make us hesitate in drawing our conclusions. And the conclusion is that, in contrast to the development in the coal-mining industry, productivity in the iron and steel industry rose rapidly.

There were enormous fluctuations, greater probably than at any time since 1815, with productivity rising and falling, within a few years, by 50 per cent or more, sometimes reaching 100 per cent when increasing. But above all these fluctuations, the general trend moves sharply upwards.

In the following table we compare the development of productivity in the iron and steel industry over the hundred odd years for which we have data:

## PRODUCTIVITY IN THE IRON AND STEEL INDUSTRY,

1833 TO 1928

(1900 = 100)

<i>Trade Cycles</i>	<i>Index</i>	<i>Trade Cycles</i>	<i>Index</i>
1833-39	36	1895-1903	107
1840-46*	43	1903-08	131
1873-78*	83	1909-13*	148
1879-86	93	1915-23	158
1887-95	98	1924-28*	322

\* Incomplete trade cycle.

Productivity during the twentieth century continued the trend of the preceding years; it rose higher and higher, even during the war and first post-war years, when fluctuations were considerable (but when, however, productivity per hour declined). Towards the end of the twenties, productivity was roughly double what it had been in the years preceding the first world war, when it was 50 per cent higher than in 1900. In fact, during the twentieth century the rate of progress often excelled that of the nineteenth century. Yet, these are only figures for annual productivity which do not take into account the shortening of the working day, which was much more rapid in the first quarter of the twentieth than in the last quarter of the nineteenth century. If we were able to compute figures for hourly productivity, we would find that productivity had increased, absolutely and relatively, even more than the above table indicates, when compared with the rate of progress in the last quarter of the nineteenth century. There certainly was all the difference in the development of productivity in the coal-mining and in the iron and steel industries. The question now arises: which of the two was typical of development in industry as a whole?

While we really have not sufficiently accurate data to construct an index of productivity in industry as a whole before 1930, I have tried to compute a rough index of employment which may serve as a basis for an intelligent estimate (but no more) of the development of annual productivity per worker from the turn of the century to 1939.

#### ESTIMATE OF THE DEVELOPMENT OF PRODUCTIVITY IN INDUSTRY AS A WHOLE, 1898 to 1939

(1913 = 100)

Year	Production	Employment	Productivity
1898	61	84	73
1899	66	85	78
1900	66	85	78
1901	63	85	74
1902	65	84	77
1903	66	85	78
1904	69	85	81
1905	71	86	83
1906	73	88	83
1907	77	90	86
1908	77	90	86

ESTIMATE OF THE DEVELOPMENT OF PRODUCTIVITY IN  
INDUSTRY AS A WHOLE, 1898 TO 1939—*continued*

(1913 = 100)

<i>Year</i>	<i>Production</i>	<i>Employment</i>	<i>Productivity</i>
1909	83	94	88
1910	89	97	92
1911	92	98	94
1912	100	99	101
1913	100	100	100
1919	57	105	54
1920	62	106	58
1921	55	98	56
1922	78	107	73
1923	88	114	77
1924	109	119	92
1925	108	123	88
1926	126	127	99
1927	110	122	90
1928	127	125	102
1929	138	129	107
1930	138	129	107*
1931	119	114	104
1932	100	95	105
1933	112	96	117
1934	104	92	113
1935	101	87	116
1936	108	91	119
1937	113	86	131
1938	106	85	125
1939†	121	91	133

One thing is clear at first sight: productivity in industry as a whole did not develop in the same way as in the coal industry. There was a definite tendency for annual production per worker to rise. This rise was very uneven, however. During the war, productivity in France fell, probably very considerably; in 1919 it was only about half of what it was in 1913. During the first post-war years it rose but did not pass the pre-war level before the end of the twenties. The thirties, however, brought a very rapid rise which finally put productivity up one-third above the pre-war level.

The following table compressing the above figures into trade cycle averages facilitates a general survey of the development of productivity in industry as a whole.

\* Since 1930 productivity per hour.

† First half only.

## PRODUCTIVITY, 1898 TO 1939

(1913 = 100)

<i>Trade Cycles</i>	<i>Index</i>	<i>Trade Cycles</i>	<i>Index</i>
1898-1903*	76	1919-23*	64
1903-08	83	1924-34	102
1909-13*	95	1934-39*	123

With the exception of the period which includes the war years, productivity rose from trade cycle to trade cycle, and in none more than in the last one, if we exclude the effects of the war slump upon the following trade cycle. While the fact that this period did not include a crisis may have affected the result (although not as much as during the nineteenth century, because under monopoly capitalism productivity often has a tendency to rise even during the crisis and depression), it seems obvious that productivity rose particularly during the last phase.

This particular rise in the thirties may also help to explain the high level of unemployment during those years, while the relatively low level of annual productivity per worker in the twenties may help to explain why unemployment was so much lower in France than in other countries. In the United States in the twenties productivity was almost double what it was before the war. In Germany and Great Britain productivity was also considerably higher during the second half of the twenties than in the pre-war years, while in France the pre-war level was only just reached.

However, the above figures do not take into account the development of the length of the working day before 1930. While this does not make much difference for the pre-war years it has not an inconsiderable influence upon the post-war figures. In the following table I give an estimate of productivity per hour in the period under review:

ESTIMATE OF PRODUCTIVITY PER WORKER AND PER HOUR  
IN INDUSTRY

(1913 = 100)

<i>Trade Cycles</i>	<i>Index</i>	<i>Trade Cycles</i>	<i>Index</i>
1898-1903*	76	1919-23*	76
1903-08	83	1924-34	122
1909-13*	96	1934-39*	148

\* Incomplete trade cycle.

In the post-war years, productivity per hour increased considerably more than productivity per year. As we know, the working day had been shortened materially as compared with pre-war years. Hourly productivity during the closing years of the thirties was about 50 per cent higher than in pre-war years—a most significant rise.

In conclusion we can sum up as follows: productivity in French industry, as measured by the annual production per worker, steadily increased during the first fourteen years of the twentieth century. During the war it declined rapidly and it took all of the twenties again to reach the pre-war level. During the thirties productivity rose considerably above the pre-war level.

The coal industry is an example of the unevenness of this development; there were industries in which productivity remained more or less stagnant during almost the whole period under review. Productivity per hour rose considerably more than annual productivity—in contrast to the period of the industrial revolution. If we measure hourly productivity we find a steady and appreciable rise from trade cycle to trade cycle, except for the war period.

This increase of productivity also led to an increase in the intensity of work. An hour's work in 1934 exhausted the worker more than it did in 1924, and in 1924 more than in 1914, and so on. While we cannot yet measure statistically the increase in the intensity of work, we can measure one of its effects, the accident rate. This auxiliary measurement, however, is a very complex one. For instance, it is useless to study non-fatal accidents, as their rate fluctuates for reasons which partly have nothing to do with the actual incidence and severity of accidents. When there is much unemployment or wages are very low the worker is more inclined to stay at work even if an injury is relatively serious, and to keep it quiet, for fear of losing some of his money or his job. Hence we must confine our attention to fatal accidents.

The issue is also complicated by the fact that, during the period under review, industry was forced, chiefly by trade union pressure, to introduce large-scale safety measures. This tended to reduce the number of accidents, even if the more intensified labour processes tended to raise them.

In the following table we shall study the rate of accidents in coal-mining. It gives us a survey of the development of fatal accidents per 1,000 fully employed miners:

## FATAL ACCIDENT RATE IN COAL-MINING, 1900 TO 1938

<i>Year</i>	<i>Rate</i>	<i>Year</i>	<i>Rate</i>	<i>Year</i>	<i>Rate</i>
1900	1.5	1913	1.1	1926	1.1
1901	1.2	1914	0.9	1927	1.0
1902	1.2	1915	1.0	1928	1.1
1903	1.0	1916	1.0	1929	1.2
1904	1.1	1917	1.4		
1905	1.1	1918	1.1	1930	1.0
1906	7.8	1919	1.4	1931	0.9
1907	1.1			1932	0.9
1908	1.0	1920	1.1	1933	0.9
1909	1.2	1921	1.0	1934	1.0
		1922	0.9	1935	1.0
1910	1.1	1923	1.0	1936	0.9
1911	1.1	1924	1.0	1937	0.8
1912	1.5	1925	1.2	1938	0.8

The table shows that the rate of accidents remained about the same from 1900 to the beginning of the twenties. Only during the second half of the twenties and in the thirties do we note a decline in the rate. If we compress these figures into trade cycle averages we get the following figures, to which, for purpose of comparison, we also add figures for the preceding cycles:

## RATE OF FATAL ACCIDENTS IN COAL-MINING, 1833 TO 1938

(Rate per Thousand Miners)

<i>Trade Cycles</i>	<i>Rate</i>	<i>Trade Cycles</i>	<i>Rate</i>	<i>Rate†</i>
1833-39*	4.0	1903-08	2.2	2.3
1840-51	—	1909-14†	1.2	1.2
1853-58†	3.9	1914-23	1.1	1.1
1860-68†	3.1	1924-34	1.0	1.2
1868-78	2.6	1934-38†	0.9	1.1
1879-86	1.6			
1887-95	1.7			
1895-1903	1.3			

The rate of fatal accidents which seems to have remained stagnant during the last decades of the industrial revolution, and

\* Not taking into account changes in the number of days worked annually.

† Incomplete trade cycle.

‡ Estimate of rate per hour of exposure.

which declined during the second period, remained fairly stable in the twentieth century. The figures before the twentieth century do not take into account the probable lengthening, and then the definite shortening, of the working day. There is no doubt, therefore, that the decline in the rate of fatal accidents is exaggerated in the above figures up to 1900. But there is no doubt also that there was a definite decline. In the present century, however, if we take into account the shortening of the working week, we find that, in spite of the material improvement in safety precautions, the fatal accident rate remained stable (the figures of the trade cycle 1903-08 are out of proportion because of a single very grave disaster in 1906). During the twentieth century we can well observe the two opposing tendencies: the increasing intensity of the working process and improved safety measures. The resultant of these two opposing tendencies is a relatively stable rate of fatal accidents. Without the increase in the intensity of work the rate of accidents might have increased occasionally, but the stagnation which we observe would not have taken place; it would, on the whole, have declined. The stagnant rate of fatal accidents at the relatively high level which we observe in all the older industrial countries is due to the increase in the intensity of work.

The question arises as to whether the development in coal-mining is representative for industry as a whole, or whether this was a development peculiar to mining. In the following table I give a rough computation by trade cycles of the average rate of fatal accidents in industry as a whole. The index is based on the official annual statistics of fatal accidents and our employment index. The figures are not given by years as they are not reliable enough for that purpose, and even the trade cycle figures are not of the best quality; but they are sufficiently accurate to give an idea of the trend.

#### INDEX OF THE FATAL ACCIDENT RATE IN INDUSTRY,

1900 TO 1934

<i>Trade Cycles</i>	<i>Index</i>	<i>Trade Cycles</i>	<i>Index</i>
1900-03*	87	1919-23*	85
1903-08	84	1924-34	99
1909-13*	95		

\* Incomplete cycle.

We see that the rate showed stagnation with a tendency towards increase. If at the same time we could investigate statistically the development of technique and the installation of safety apparatus we would find considerable progress in this direction. In other words, the above table on industry as a whole results in even more unfavourable conclusions than those we have drawn from the developments in coal-mining; the record of fatal accidents tends towards a deterioration, in spite of the fact that safety measures had been improved and their application had become more widespread. The only reasonable explanation of this fact which is not peculiar to France is that the intensity of work had been considerably increased, a fact known to us anyway, but whose effects cannot yet be measured statistically by any other means than a study of the development of accidents.

Our conclusion is then that labour conditions, as far as the development of the fatal accident rate is concerned, deteriorated slightly, while with respect to the intensification of labour, conditions definitely deteriorated.

### 5. STRIKE ACTION AND TRADE UNIONS

While we have found many aspects of the life of the workers which tended to deteriorate during the twentieth century, it must be clearly realized that conditions would have become a good deal worse had the workers not taken organized action against the attempts of the employers to lower their standard of living.

The following table gives a short survey of the membership of the industrial and commercial French trade unions:

TRADE UNION MEMBERSHIP, 1900 TO 1936

1900	492,647	1920	1,580,967
1905	781,344	1925	1,846,047
1910	977,350	1936	4,314,740*
1914	1,026,302		

Strikes were largely, although not exclusively, launched and organized by the trade unions. The development of strike movements during the present century was as follows:

\* End of year.

## STRIKE ACTION OF FRENCH WORKERS, 1900 TO 1937

<i>Strikes</i>			<i>Strikes</i>		
<i>Year</i>	<i>Men</i>	<i>Strike-Days</i>	<i>Year</i>	<i>Men</i>	<i>Strike-Days</i>
1900	222,714	3,760,577	1920	1,316,559	23,112,038
1901	111,414	1,862,050	1921	402,377	7,027,070
1902	212,704	4,675,081	1922	290,326	3,935,493
1903	123,151	2,441,944	1923	330,594	4,172,398
1904	271,097	3,934,884	1924	274,865	3,863,182
1905	177,666	2,746,684	1925	249,198	2,046,000
1906	438,466	9,438,594	1926	349,309	4,072,163
1907	197,961	3,562,220	1927	110,458	1,046,019
1908	99,042	1,752,025	1928	204,116	6,376,675
1909	167,492	3,559,880	1929	239,878	2,764,606
1910	281,425	4,830,041	1930	581,927	7,209,342
1911	230,646	4,096,393	1931	48,275	949,564
1912	267,627	2,318,459	1932	71,561	2,244,281
1913	220,448	2,223,781	1933	87,091	1,199,334
1914	160,566	2,187,272	1934	100,584	2,393,463
1915	9,361	55,278	1935	108,884	1,182,159
1916	41,409	235,907	1936	2,422,844	—
1917	293,810	1,481,621	1937	426,587	—
1918	176,187	979,634			
1919	1,150,718	15,478,318			

This development, except for the last few years before the outbreak of the war in 1939, is, on the whole, not very different from that in other countries. Strike activity before the first world war was on a higher level than at the end of the nineteenth century. During the war, strike activity at first decreased rapidly, almost to zero. During the last two years of the war it increased again. In 1919 and 1920, strike activity reached record proportions and then began to decline. During the crisis itself the decline was very rapid. The great people's movement which initiated the Popular Front government also found expression in an increase in strike activity. Immediately before the outbreak of the present war there was a renewed decline.

## 6. SOCIAL LEGISLATION

While the standard of social legislation between 1870 and 1900 was very low in France as compared with that in other countries, during the years from 1898 to 1914 France followed the general trend by introducing a number of insurance schemes. The years of introduction were:

- 1898 Accident insurance for industry and the merchant marine
- 1906 Accident insurance for trade employees
- 1910 Invalidity insurance
- 1910 Old age and dependants insurance

It is well known that in 1914 France was still backward as compared with Great Britain and Germany, though more advanced than the United States. But the decisive point is not so much that she was still behind Germany and Great Britain, but that she had finally joined the general movement to introduce at least some social insurance measures.

At the same time further measures were taken to protect women and children from some of the most obvious consequences of long and strenuous industrial work. The law of March 30, 1900, instituted an equal working day of eleven hours for men, women and juveniles, of ten and a half hours beginning with 1902, and of ten hours from 1904 onwards. Only if the men were working in a plant or section where no women and children were employed did they have to work longer hours. For miners working underground the law of June 29, 1905, established the eight-hour day. From June 13, 1906, the observance of Sunday as a day of rest, which had been abolished in 1880, was reintroduced. In March 1910 the truck system was finally abolished. All these and numerous less important laws and decrees were codified—without further improvements of any importance being introduced—in the Code du Travail et de la Prévoyance Sociale of December 28, 1910.

During the world war 1914-18 only one measure of importance was introduced: the fixing of minimum wages for home workers.

The first post-war years brought only one measure of real importance: the introduction of the eight-hour day by the law of April 23, 1919. During the following years a number of small-scale improvements were introduced, and accident insurance was extended to cover agriculture. By the law of April 30, 1930, the social insurance system, covering sickness, maternity, invalidity, old age and death was reorganized and considerably improved. But in 1935 France was still behind conditions in Germany (before 1933) and Great Britain as far as the social insurance system was concerned, as well as in general welfare and labour protection measures.

This situation changed considerably in those weeks and months of the summer of 1936, which were the heyday of French social reform. During this short period the united working class of France, supported by large masses of the petty bourgeoisie and peasants, waged a successful war against reaction and oppression. Never in the history of capitalist France was such universal progress made as during this short phase.

On June 20th holidays with pay were introduced;

On June 21st the forty-hour week without reduction of wages was established throughout France;

On June 24th collective wage agreements (which up to then were few and often ineffective) were generally introduced;

If we add to this the raising of the school age in August, and improvements in the social insurance system in the same month, we have a list of the most important social measures introduced by the Popular Front government affecting the status of the workers.

In the following years less progressive and reactionary governments whittled down some of the measures, introduced numerous exceptions, and so on—but they could not destroy completely the great successes of the summer of 1936.

## 7. THE COLONIAL EMPIRE

During the twentieth century the area of the French colonial empire increased only slightly, while the total population rose by roughly 8 million, from 56 million in 1900 to about 64 million in the beginning of 1940.

But while the period of colonial expansion had practically ceased—the chief gains had been the colonies won from Germany in 1919—exploitation of the colonial peoples made rapid progress. There are several ways by which we can measure this increased exploitation indirectly; but there is no way of measuring it directly, as there are practically no statistics available of labour conditions in the colonies.

The following table showing iron ore production in North Africa tells an interesting story:

## IRON ORE PRODUCTION IN NORTH AFRICA

(Thousand Tons)

<i>Year</i>	<i>Algeria</i>	<i>Morocco</i>	<i>Tunisia</i>
1913	1,349	—	597
1920	1,060	—	406
1930	2,232	—	828
1932	467	—	209
1938	3,105	266	822

Between 1920 and 1930 production of iron ore more than doubled in Algeria and Tunisia. During the crisis it declined by about three-quarters. In 1938 new record heights were reached, and, at the same time, a new producer of iron ore emerged: French Morocco.

This is typical for other mineral products. Let us look at the production of coal in North Africa:

## COLONIAL COAL PRODUCTION

(Thousand Tons)

<i>Year</i>	<i>Algeria</i>	<i>Morocco</i>	<i>Indo-China</i>
1913	—	—	509
1920	—	—	700
1930	17	1	1,955
1932	25	15	1,713*
1938	13	123	2,348

In Algeria production was small and remained small. In Indo-China it was already substantial in 1913, and increased materially in post-war years; it declined during the crisis and reached a record height in 1938. Morocco had no production to speak of until 1930, and then developed rapidly.

The picture we gain is one of increased mineral output in the colonial empire, hastened by the emergence of new producing colonies which often within a short time attained importance as sources of raw materials.

To this must be added the great rôle which the colonies play in the field of agricultural production.

The following table, giving some figures on trade relations between France and her colonies, well illustrates the rôle of the colonies as suppliers of raw materials and agricultural products;

\* In 1933 production was only 1,591,000.

and also shows their importance for France as consumers of manufactured commodities.

# COMPOSITION OF TRADE BETWEEN FRANCE AND HER COLONIAL EMPIRE IN 1937

<i>Goods</i>	<i>French</i>		<i>Colonial Imports</i>		<i>Colonial Exports</i>	
	<i>Imports</i>	<i>Exports</i>	<i>North</i>	<i>Other</i>	<i>North</i>	<i>Other</i>
	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>
Agricultural Products ..	26	15	28	17	70	52
Raw Materials and Semi-Finished Products ..	59	29	14	12	26	44
Manufactured Goods ..	15	56	58	71	4	4

It is obvious that the colonies formed an important market for French manufactures, while they exported chiefly raw materials, agricultural products and some semi-finished articles. They are under-developed, some quite undeveloped, as all-round economic organisms, but they are developed to a certain extent as suppliers of raw materials, especially as compared with forty or eighty years ago. They are objects of economic exploitation, and are not engaged on their own behalf in economic development.

As to the condition of the colonial peoples, those who have seen them need no statistics in order to realize the misery in which they live. Those who have studied accurate accounts of their life need no figures to measure the degree of their hardship. Sometimes we come across a few figures which illustrate certain aspects. For instance, the fact that the native miners in Morocco do not receive one-third the wages of French miners. Or the fact that during the period under review, a large number of people worked under conditions of forced labour. Or the fact that the death rate was as follows in 1936:

	<i>Per Mille</i>
Algeria, Whites.. ..	11.7
Algeria, North, Natives ..	15.9
Madagascar .. ..	18.4
Tunisia .. ..	16.3

According to these figures the death rate among the African peoples was considerably higher than among the whites—though probably statistics of native mortality are unreliable and the actual death rate was higher.

\* Algeria, French Morocco and Tunis.

There are numerous other stray examples to be found, but insufficient to construct any connected statistical history of labour conditions, even of certain aspects only. This, in itself, is an indictment of French colonial administration. In addition to economic suffering, there exists—to a varying degree, according to which area is in question—the denial or circumscription of the democratic liberties of the people, and especially of the African working and peasant classes.

France has added 8 million people during the last forty years to those exploited by French capitalism; and during these forty years many millions in the French colonies, who in 1900 had relatively little direct contact with French capitalism, were drawn into the orbit of direct exploitation as miners, plantation workers and so on, to say nothing of their conscription for the first world war. We see then that French capitalism has extended its exploitation of its colonial empire, both by intensifying the exploitation of the individual worker and by enlarging the field of exploitation. The number of workers directly exploited by French capitalism in the Colonial Empire has grown much more than the increase in the Empire's population would indicate. This fact alone has sharply depressed the standard of living of all workers exploited by French capitalism, whether at home or abroad, and has secured large extra profits for that capitalism.

## 8. SUMMARY

The trend in labour conditions in France during the twentieth century was sharply downward. Real wages, on the whole, declined. The working day, it is true, was still further reduced. But the intensification of labour processes increased. The worker's strength and endurance were more heavily taxed than before. Unemployment rose sharply during the thirties. The rate of fatal accidents began to increase again. The number of workers exploited rose, and the number of those working under especially poor conditions—in the Colonial Empire—rose faster than that of those working under less wretched conditions in the home country.

Throughout our study we have not taken into account the conditions of the workers under the German occupation. During

these years a number of French big industrialists collaborated with the German Fascists and shared the profits derived from the exploitation of French labour by the enemies of France and of mankind. In fact, this collaboration was in one way merely the continuation of a policy, directed against the interests of the French workers, which the French monopolists and trust owners had pursued for many years before 1940. It is still too early to compile a statistical history of the exploitation of the French workers between 1940 and 1944. Or would it be useful to give much attention to a table such as the following (published in the *Bulletin de la Statistique Générale de la France*, Avril-Mai, 1945) :

#### WAGES AND COST OF LIVING IN FRANCE, 1938 TO 1944

(October, 1938 = 100)

Year and Month	Skilled Workers	Unskilled Workers	Miners	Cost of Living
October, 1938	100	100	100	100
October, 1939	103	103	105	108
October, 1940	104	103	105	118
October, 1941	117	121	138	153
April, 1942	123	128	137	164
October, 1942	130	134	150	185
April, 1943	133	137	157	203
October, 1943	142	149	156	213
April, 1944	163	163	187	237
October, 1944	231	248	262	271

According to this table the cost of living has increased more than wages. The wages of skilled workers had lost by October, 1941, about one-quarter of their 1938 purchasing power. By October, 1942, they had lost 30 per cent. One year later, they had lost roughly one-third. Since then real wages seem to have slightly improved again.

These figures are minimum losses. And they do not tell us anything about all the other sufferings of the French working class which were so widespread and bitter during the years of German occupation. Some work is being done already to-day to bring together all the data needed for a true and detailed description of working conditions under German occupation. We shall have to wait some time until we can evaluate and incorporate it into a history of labour conditions in France. But we do not need a detailed statistical survey in order to realize

that these last few years have been the most terrible for French labour. May these sad years be followed by a period in which the French people will enjoy increasing freedom from hardship and increasing prosperity and happiness.

#### SOURCES AND REMARKS

The wage statistics have partly been improved as compared with those I published in my *Labour Conditions in Western Europe, 1820 to 1935*. They were constructed in the following way:

Wages 1900 to 1914: same sources and methods as for the preceding years (see sources and remarks at the end of the preceding chapter).

Wages 1914 to 1923: wages in mining, sugar and tobacco taken from the annual publications of the *Annuaire Statistique*; wages of metal workers based on the data given by Simiand, *Le Salaire*, Vol. III, wage tables; textiles, printing and building same source; for wages in agriculture see Lucien March, *Mouvement des Prix et des Salaires pendant la Guerre*, *Carnegie Histoire Économique et Sociale de la Guerre Mondiale*, p. 297. In computing wages in industry as a whole and in industry and agriculture the above wages indices were weighted according to the number of workers employed in the individual industries.

Wages 1924 to 1939: wages in mining, sugar and tobacco taken from the annual publications of the *Annuaire Statistique*. Wages in the metal industries 1924 to 1936 computed from the figures given in the *Bulletin de la Statistique Générale de la France et du Service d'Observation des Prix*, published annually, for daily wages of plumbers, locksmiths, turners in the provinces, and for plumbers and turners in Paris; for the year 1937 no daily data were published and I used the hourly data, assuming a shortening of the working day by 10 per cent; for 1938 I also used hourly wage data, assuming stability of hours of work; for the first half of 1939 I used the data for all metal workers in Paris, assuming no change in hours per week. For the building trades I used the corresponding data and assumptions for masons, building labourers and painters in the provinces, and joiners and carpenters in Paris; for textiles I used the corresponding figures for

weavers and dyers in the provinces; for printing, the figures for compositors in the provinces and in Paris.

Average wages in industry 1924 to 1939 were not computed on the basis of the above wage data, but I used the methods of the International Labour Office in constructing an index of average weekly wages in French industry.

Wages in agriculture 1924 to 1938: I used the official data published in the above mentioned *Bulletin* for 1924, 1926, 1928, 1930, 1932, 1934 and 1938, with not very reliable interpolations based on numerous sources and indications.

Hourly wages of men and women are taken from the tables on salaries given annually in the *Annuaire Statistique, Résumé Rétrospectif*; the wages of men and women in the tobacco and sugar industries can be found in the same source.

The cost of living data for the years 1900 to 1914 were computed as indicated in my study, *Die Entwicklung der Lage der Arbeiterschaft in Europa und Amerika, 1870-1933*.

As to the development of the cost of living in the years 1914 to 1920, I followed the suggestion of Lucien March in the book I have mentioned to use the food index for Paris, which includes petrol and spirit for heating purposes.

For the years from 1920 to 1939 I used the official data of the cost of living in Paris.

It is obvious from the above that the cost of living index is not very reliable. But it cannot be replaced until French statisticians, for the first time, compute an all-embracing reliable monthly index of the cost of living.

The statistics on the length of the working week for the years from 1930 to 1939 are based on the figures in the *Bulletin de la Statistique Générale de la France et du Service d'Observation des Prix*. For the preceding years I used the table in Colin Clark's *The Conditions of Economic Progress*.

Unemployment and short-time data for the years from 1900 to 1913 were officially published in the *Annuaire Statistique*; the data for the remaining years are my own estimates.

Production per day and per underground-worker in coal-mining: official data of the *Statistique de l'Industrie Minérale*, issued annually. Productivity in the iron and steel industry computed from the data given in the *Résumé Rétrospectif* of the *Annuaire*

*Statistique*. Productivity in industry as a whole was computed as follows: for production I used the official index given in the *Annuaire Statistique*; employment was computed by assuming a regular annual increase of the number of employed between two census years, and correcting the resulting index according to the above given statistics of unemployment and of hours of work.

For fatal accidents in coal-mining, I used the *Statistique de l'Industrie Minérale*, published annually; the index of the fatal accident rate in industry as a whole is based on the employment index I have already described and the data given in the *Annuaire Statistique* on the number of fatal accidents registered annually by labour inspectors.

For strike and trade union membership statistics, see the *Annuaire Statistique*.

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